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# **USSR Report**

**AGRICULTURE**

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14 February 1984

USSR REPORT  
AGRICULTURE

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### HARVEST RESULTS IN USSR SUMMARIZED

Moscow IZVESTIYA in Russian 18 Nov 83 p 1

[Article by O. Pavlov: "The Harvest Is Ready in Winter"]

[Text] Kolkhozes and sovkhozes are now beginning to summarize the results of the agricultural year. Of course it is not over yet, but the harvest has been collected, products have been sold to the state, feed has been stored and it is possible to predict the results in livestock raising. This means that all the data is available for an analysis, conclusions and decisions for the future, decisions that will mean the fulfillment of the five-year plan. At the same time preparations for the future harvest are continuing.

It seemed that fall would go on forever. But it was as if winter was just saving its strength. It made itself known via a recent snowfall in central Russia. The snow came suddenly and winter was here. But this does not mean that there are fewer concerns for farmers and their partners in the agro-industrial complex. Modern intensive agricultural production enjoys no dormant period in winter.

We must at least mention that the cotton harvest is not yet complete. It is occurring now under unique conditions related to the fact that in many places the maturation of cotton bolls was slower and that it was necessary to push back the schedule for completing the "white" harvest. But cotton farmers are proceeding toward their goal with persistence, striving to fulfill their quota for the sale of raw materials to the state as well as their socialist obligations. The plan has been completed successfully by the farmers of Azerbaijan and Khorezm Oblast.

Uzbekistan is procuring its 6 millionth ton of raw materials. The cotton farmers of the Kara-Kalpak ASSR, having cultivated a large harvest and having organized machine harvesting of it, are working well. Tashkent Oblast is about to report on its fulfillment of the plan.

Now let's talk about the future harvest. A great deal must be done for it in winter. This means first to repair equipment well. This year the machine

operators of Azerbaijan, Voroshilovgrad, Minsk and Saratov oblasts were the initiators of competition for the model preparation of equipment. The main thing that they are striving for is to prepare all sowing and soil-cultivation technology and most tractors and grain combines by 1 January. It is important that the initiators of competition are paying special attention to the preparation of feed-procurement technology.

It would be desireable if this competition acquired a new qualitative feature. Perhaps it could be more demanding toward its participants. After all, it is no secret that it is traditional. And it does yield results, but they are not always the optimal results and they do not occur everywhere. For example, year after year a considerable number of oblasts begin harvesting operations with 10 and more percent of their combines inoperable--they were not able to repair them. I understand that tractors are always being used, and that some percentage of tractors is always in need of some type of repair. But a combine does not have to work for more than a month. All machines must and can be readied for this "peak" month.

Let us discuss this "peak" month. It has been said for a long time that the combine only works one month out of the year. Early on there were few combines. Now prior to the start of harvesting operations we read and hear about energetic obligations--to complete grain harvesting in 8-10 work days. The present fleet of combines enables us to do this in most grain regions. And what? I do not have to remind you about the ideal harvesting weather in the Non-Chernozem Zone this year. In most oblasts and autonomous republics grain harvesting took about 40 days. Even the Kuban', well-equipped and having experienced machine operators, spent over 20 days on harvesting operations. Regardless of the attendant circumstances, the level of readiness of technology remains the most important thing. Today it frequently does not meet the needs of modern farming. And it must meet these needs.

Complaints should not be directed only at associations of Sel'khoztekhnika [Agricultural Equipment Association], as is done everywhere. In recent years even though the quality of equipment has not improved as much as desired it could be better serviced and more carefully operated in many places. This is why after a season or two some machines need not capital but so-called on-going repairs. That is, they need less complicated repairs.

Such repairs are made primarily by the enterprises themselves. Sel'khoztekhnika is obligated to supply the necessary spare parts. There are many conflicts because of this. But it appears that with the advent of the RAPO [Rayon agro-industrial association] things are beginning to change for the better. Nevertheless, enterprises must in turn secure a high level of technological readiness. Alas, this does not always happen. This means that we must do everything we can to strengthen the engineering-technical service in kolkhozes and sovkhozes.

If we speak about the current level of technological readiness we must say that it is the same as last year. Is this good or bad? I feel that it could be better. This year most types of machines left the fields earlier than last year. It would probably be possible to begin servicing them earlier too.

But right now not much over one-third of grain combines are ready. Over half a million machines remain to be repaired. Almost half of the sowers are not ready (how long have they remained without an inspection?). There is a great deal of work to do with irrigation and watering machinery--61 percent are in operation, and this is less than at the same time last year. And these are complicated units; their repairs are not easy.

The level of readiness of many types of equipment is lower than the national average in the RSFSR. Over 296,000 tractors require repairs--one out of five. Thirty percent of the tractors in disrepair are in Kazakhstan. In other words, we can and must increase the pace of repairs and most importantly--carefully control their quality.

Other concerns are no less important now. Seed is one example. In general the country has sufficient supplies. But there are details--someone is experiencing a shortage here, someone else has an excess. At the present time Sortsemprom [Association of the high-quality seed industry] is making the real picture in each union republic more precise and is planning maneuvers. The quality of sowing material for most crops is adequate, with the exception of flax and rice. But there is time for improvements. We just cannot waste the time.

Enterprises are moving organic fertilizers into the fields. In the country as a whole this work is proceeding more rapidly than last year. It is satisfying to note that most of the organic fertilizer was applied during the fall cultivation of soil--this type of fertilization is most effective. I would like to single out Novgorod Oblast. It did not excel much in this matter, but now as of 1 November its enterprises applied an average of over 8 tons of organic fertilizer per hectare. Almost 10 tons per hectare were applied by the kolkhozes and sovkhozes of Ivanovo Oblast. But the doses of organic fertilizer remain low, as before, in Ryazan, Tula, Rostov, Orlov and especially Volgograd, Kuybyshev, Saratov and Kurgan oblasts. In its day IZVESTIYA criticized Perm Oblast for this. It is satisfying that things have changed noticeably here.

In the village the winter day is full of concerns. Of course there is not the same intensity as during the harvesting period, but still...The year must be finished well and a surplus must be created for the future.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

FALL FIELD WORK PROGRESS IN USSR

Moscow IZVESTIYA in Russian 27 Oct 83 p 1

[Untitled article by O. Pavlov]

[Excerpt] The decisive period in cotton harvesting is coming. There is confidence that cotton farmers will complete their work in a unified and goal-oriented manner and with a high productivity of labor.

Other types of field operations are practically completed. Sunflowers are being harvested from the last hectares--6 percent of the area remains. Sugar beets must still be harvested on 3 percent of the total area in the country; vegetables--on 4 percent of plantations. A very small quantity of grains has not yet been threshed--in East Siberia, primarily in Chita Oblast.

Winter crops occupy 38.4 million hectares. Their sowing is being completed in the republics of Central Asia and the Transcaucasus. Plowland has been raised on 97 million hectares.

There has been good weather this fall. Farmers are completing field work earlier than usual. Now the time for analysis, for considering successes and failures, is near. I feel that enterprises and agro-industrial associations will approach the evaluation of the year's results seriously and self-critically. After all, this was the first year of the work of the RAPO [Rayon agro-industrial association] and it was the beginning of the introduction of a zonal scientifically-based farming system. What have we achieved and where were errors tolerated? In the near future will we be able to more effectively withstand the effects of drought and other unfavorable weather phenomena? How have collective contracts, which were the subject of numerous discussions in the spring and summer, worked? These and many other questions must be answered in annual evaluations in enterprises, rayons and oblasts. IZVESTIYA will receive information about these evaluations and intends to familiarize its readers with it.

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## POST HARVEST CROP PROCESSING

### RSFSR FRUIT, VEGETABLE INDUSTRY MISMANAGEMENT, MINISTER'S FOLLOW-UP

#### Large-Scale Losses, Misappropriation

Moscow SOVETSKAYA ROSSIYA in Russian 1 Nov 83 p 2

Article by V. Avdevich (special correspondent of SOVETSKAYA ROSSIYA) and I. Rashkovets, RSFSR assistant procurator: "Bonuses for ... Losses"

Text Month after month the Lyubertsy Canning Plant confidently fulfilled the planned assignments for the sale of output. The satisfactory percentage gave prestige to the managers and brought bonuses for the collective. But then the inspectors of the Lyublinskiy Rayon Committee of People's Control glanced at the reports and discovered systematic padding in them. As it turned out, increments for unprofitableness, payments for transport and packaging materials and trade discounts were added to the cost of the enterprise's own finished output... The annual sum was considerable: more than  $\frac{1}{2}$  million rubles.

"How did this happen?"

"The accounting department let us down," V. P. Chudotvorov, director of the plant, is distressed. "I am no expert in financial matters and was unable to check the reliability of the data..."

The references to the director's own incompetence do not embellish him and, moreover, do not excuse him. As a manager he was obliged to establish a strict system of accounting and control at the enterprise, with the help of specialists, of course. However, this is precisely the point: The posts of the chief accountant and other leading specialists remained vacant for months.

Here is a characteristic detail: A. Sal'nikov, chief of the Main Administration of the Canning and Drying Industry of the RSFSR Ministry of the Fruit and Vegetable Industry, and N. Kovchug, chief accountant of the main administration, often came to the plant on "inspection visits." However, systematic plan padding also remained unnoticed by them. It turned out that even ministerial control was not on a high level.

What happened in Lyubertsy is not an isolated fact. Not so long ago, checking report documents in the subordinate organizations of the RSFSR Ministry of the Fruit and Vegetable Industry, the RSFSR Central Statistical Administration

discovered padding at one out of two plants. The reason was the same: the inability and at times the lack of desire to establish an efficient accounting control system. Ultimately, precisely because of this cases of misappropriation, spoilage and losses of finished output became frequent in the sector's associations. One of the latest checks conducted by the republic's Ministry of Finance disclosed a deficiency of goods worth 329,000 rubles at seven enterprises of the RSFSR Ministry of the Fruit and Vegetable Industry. For example, V. Fadeyev, director of the Komintern Sovkhoz of the Gor'kiyplodoovoshchikhoz Association, together with his subordinates--deputy V. Grishin, chief engineer A. Grishin, chief power engineer A. Derbepev and V. Svirskiy, former secretary of the party organization--appropriated and squandered 32,000 rubles. M. Aksennov, R. Morozov, A. Zelenova, V. Chanturidze and T. Kudava, heads of the vegetable storage facilities of the base No 1 of the Irkutskplodoovoshchikhoz Association, and warehouse man V. Ignat'yev "released" output in such a way that, as a result, a deficiency of 169,000 rubles was uncovered. Yu. Mozhartsev, chief agronomist of the Pionerskiy Sovkhoz of the Priazov'ye Firm (Rostov Oblast), and L. Iryupina, head of the threshing floor, transferred about 43,000 tons of sunflower seeds to the "waste" column, earning more than 15,000 rubles on this.

Workers of law protection bodies exposed the offenders and instituted criminal proceedings against them. And what about subordinate controllers? Why were they sluggish? As it turned out, independent auditing services have not yet been established in one-third of the associations. Owing to this, the planned checks could not be conducted at 533 enterprises last year. At 44 out of these enterprises there were no audits at all for 2 years. However, even in cases when the checkers from ministries and associations disclosed major deficiencies and misappropriation, they did not hasten "to wash the dirty linen in public." Last year departmental controllers uncovered illegally written off values and paid bonuses worth 193,000 rubles at the Khabarovsk City Fruit and Vegetable Trade Organization. However, audit documents were transferred to investigating bodies only after... 10 months. Materials were also detained for an unjustifiably long time in the Stavropolplodoovoshchikhoz, Chitaplodoovoshchikhoz and Ryazanplodoovoshchikhoz associations.

Padding, misappropriation, spoilage and losses of material values at the sector's enterprises assumed such a scale that the republic's procurator was forced to submit a report to V. Naumov, RSFSR minister of the fruit and vegetable industry. Having examined the material prepared by jurists at a board meeting, the minister issued an order, which should put an end to mismanagement and abuse. When reading this multipage document, at first it seems that the sector's staff has seriously embarked on the introduction of proper order. It acknowledges all the facts stated in the procurator's report and enumerates the measures that must be taken to rectify the situation.

However, here is a question: To what extent will these measures prove to be effective in practice? What evokes a doubt? The insufficient demands on the officials responsible for mismanagement. For example, a "reprimand" was given to A. Sal'nikov, chief of the Main Administration of the Canning and Drying Industry, "... for serious violations in ensuring the preservation of socialist property... insufficient work on the prevention of deficiencies, misappropriation and spoilage of material values and illegal expenditures of monetary assets." But this manager, under whose subordination the Lyubertsy

Canning Plant was, with his permissiveness contributed to the fact that padding occurred at the enterprise for a long time. Literally a few days after the rayon committee of people's control imposed on the enterprise director a stoppage of pay to cover the deficiencies, A. Sal'nikov, chief of the main administration, hastened to give him and his subordinates financial assistance. Moreover, after 2 months he also granted them sizable bonuses. Let us recall that in May 1981 this manager was officially warned by the RSFSR Procuracy about the inadmissibility of legal violations. Then, as now, big losses due to deficiencies, misappropriation, mismanagement and breaches of state discipline were uncovered at many enterprises forming part of the Roskonservprom system. During the time that has passed since then the situation at the plants of the main administration has not changed. However, for all this A. Sal'nikov was given a reprimand in the minister's order!

The procurator's report stated that "an examination of audit materials was unjustifiably delayed, the proceedings established by law were not always instituted against the culprits and exhaustive measures to make up for the material damage at their expense were not taken." Nevertheless, V. Samoylenko, chief of the Control-Auditing Administration, assured us that not everything was as bad as it seemed from the side.

"Our staff is not inactive," he argued. "Every year it gathers strength and stirs up its activity. A total of 15 audits and subject checks were conducted in 1981, the year of the ministry's formation and 50, this year."

The activity has increased. What are the results? In 1981 the damage due to deficiencies, misappropriation and losses of material values uncovered by departmental auditors totaled 1.3 million rubles and last year, 5.9 million.

Unfortunately, after the conducted audits significant practical changes in the ministry's work did not occur. The audit documents were placed in files and both those who checked and those that were checked forgot about them for a long time. Only 2 months after the responsible commissions visited the Chechen-Ingush and Astrakhan associations did the board of the RSFSR Ministry of the Fruit and Vegetable Industry examine the cases of abuse uncovered there and issued orders. With regard to the materials of the audits conducted at Mosplodoovoshchkhоз and Sevoretinplodoovoshchkhоз in August of last year, the ministry simply disregarded them. Neither administrative, nor legal measures were taken.

"The board cannot issue orders on every check document," V. Samoylenko justifies himself. "And then I find nothing extraordinary in the transgressions reported by the auditors."

Nothing extraordinary? One of the documents states the following: "A deficiency of 79 head of cattle, 36 head of horses and 10 head of hogs and spoilage and losses of agricultural output worth 137,000 rubles were uncovered in Mosplodoovoshchkhоз in 1981." Let us take the document dated 1982. We read: "Deficiencies, misappropriation and spoilage of material values worth 280,000 rubles were uncovered throughout the Mosplodoovoshchkhоз Association during the first 6 months." As we see, the amount of damage doubled in only 6 months. However, only 2,000 rubles were recovered from the culprits. And V. Samoylenko considers this quite normal?

The fact that there is no business-like interaction based on principles among some of the ministry's services also affects the effectiveness of departmental audits. Here is only one fact. A draft of the new Statute on the Control-Auditing Administration was prepared in the ministry last year. In accordance with the law it defined the duties, as well as the rights, of the auditor. Well, what of that? As soon as this document reached M. Farber, chief of the legal administration, for signature, the content of the draft was corrected to such a degree that the very concept of the "controller's right" disappeared. The matter reached deputy minister N. Aver'yanov. However, he, too, did not manifest concern for the authority and rights of departmental control. There were also other facts. Certain documents of checks conducted by departmental audits were often held up in the legal department. How can prompt measures be taken on them?

The effectiveness of ministerial audits is also low, because today one out of three checks is conducted without the enlistment of experienced jurists, accountants, economists and planners. For example, the workers of the Legal Administration of the RSFSR Ministry of the Fruit and Vegetable Industry took part in departmental checks only twice in 2 years. And this, too, was rather done for form's sake. M. Farber, chief of the administration, limited his activity in the commission auditing the Mosplodoovoshchkhоз Association to the study of the correctness of the issued orders. Meanwhile, according to the estimates of the RSFSR Ministry of Finance, the indebtedness due to deficiencies and misappropriation caused by the sector's specific workers now totals 5.3 million rubles. However, only one-third of the damage done to the state has been indemnified.

Who in the sector is responsible for accounting and control? A. Kolchin, chief of the Administration of Accounting and Reporting, M. Farber, chief of the Legal Administration With Arbitration, and V. Samoylenko, chief of the Control-Auditing Administration. The state entrusted them with the protection of social property in the entire sector of the agroindustrial complex. They were given the necessary rights and a fairly large staff of workers. How are they fulfilling the duties prescribed to them? We will be blunt, negligently! According to the data of the RSFSR Ministry of Finance, the damage due to deficiencies, misappropriation and losses of material values totaled 45 million rubles last year. This is how much the passivity of officials cost the state. And what about the measure of responsibility? V. Naumov, RSFSR minister of the fruit and vegetable industry, drew the attention of these managers to the "lower demands on subordinates." He again urged them "to intensify their work."

Did they not get off too lightly? Is such leniency not rather expensive?

#### Minister's Commentary

Moscow SOVETSKAYA ROSSIYA in Russian 4 Jan 84 p 4

/Article by V. Naumov, RSFSR minister of the fruit and vegetable industry:  
"Compensating for Damage" 7

/Text/ Having examined the article "Bonuses for... Losses" published in the newspaper SOVETSKAYA ROSSIYA on 1 November 1983, the board of the RSFSR Ministry of the Fruit and Vegetable Industry considered the facts set forth in it correct. Conditions for the preservation of socialist property and observance of state and financial discipline have not yet been created on the sector's subordinate farms. It has not been possible to fully eliminate the omissions in the organization of accounting and control-auditing work at the enterprises forming part of the system of the fruit and vegetable industry. To compensate for the damage done to the state, which was uncovered during 9 months of 1983, a total of 252 cases involving losses due to deficiencies and misappropriation of commodity stocks and monetary assets totaling 1,926,000 rubles were referred to investigating authorities. For misappropriation and shortcomings in the economic and financial activity disciplinary proceedings were instituted against all the culprits, of whom 186 were relieved of their jobs and dismissed.

A. Sal'nikov, chief of the Main Administration of the Canning and Drying Industry, who previously headed Roskonservprom, was among the managers on whom administrative penalties were imposed. An additional check conducted after the publication of the article "Bonuses for... Losses" showed that A. Sal'nikov, head of Roskonservprom, transferring the materials of the audit that uncovered major shortcomings in the operation of the Lyubertsy Canning Plant to investigating bodies, subsequently acted without respect for principles: He permitted the payment of a bonus and financial assistance to plant director V. Chudotvorov. The ministry's board took into consideration A. Sal'nikov's statement to the effect that he would compensate for the damage done to the state. The ministry's party committee gave a reprimand to party member A. Sal'nikov.

For shortcomings in the work of the Legal Administration With Arbitration the ministry's board gave chief M. Farver a reprimand. The board demanded that N. Donov, A. Kolchin, V. Samoylenko and B. Makholin, chiefs of administrations, conduct audits and checks in a principled manner, make specific decisions on them and constantly control their execution.

The ministry's party committee gave strict orders to party members--M. Farber, chief of the Legal Administration With Arbitration, A. Kolchin, chief of the Administration of Accounting and Reporting, and V. Samoylenko, chief of the Control-Auditing Administration--and took into consideration their assurances that they would do everything that was necessary to improve the activity of these subdivisions of the ministry.

Together with the RSFSR Ministry of Justice measures to improve the work of the sector's legal service were determined. A conference with managers of planning, financial, accounting and auditing services of republic (ASSR), kray and oblast Plodoovoshchkhоз associations was held. Problems connected with the preservation of material and monetary assets were examined at this conference.

When discussing the article "Bonuses for... Losses," the ministry's board noted that the Commission for the Control of the Preservation of Socialist Property headed by deputy minister N. Aver'yan did not manifest proper persistence in

the organization of accounting and reporting, as well as control-auditing and legal work. The board demanded that deputy ministers and chiefs of administrations and republic production associations more strictly approach the selection and disposition of personnel and educate them in the spirit of high consciousness and responsibility for the tasks assigned to them. Measures are taken to reinforce control-auditing and accounting services with experienced specialists.

The preservation of material values largely depends on the technical state of warehouse facilities. For 1983-1985 plans have been made to allocate 91 million rubles for the establishment and improvement of bases for the storage of fruit and vegetable products, which exceeds 4.5-fold the limits of capital investments obtained 2 years ago during the ministry's organization from the RSFSR Ministry of Trade. A total of 335 million rubles, or 1.6 times as much as envisaged by the RSFSR Ministry of the Food Industry at one time, are assigned for the development of the canning industry. Centers for the initial processing of fruits and vegetables are being built at sovkhozes and bases of city fruit and vegetable trade organizations. This will make it possible to improve the quality of output placed for long-term storage. Measures for the intensification of horticulture and vegetable growing and improvement in trade and procurement activities are being implemented.

Critically evaluating the results of work during the past period, the board of the RSFSR Ministry of the Fruit and Vegetable Industry proceeds from the shortcomings in the work of the USSR Ministry of the Fruit and Vegetable Industry noted at one of the meetings of the Politburo of the CPSU Central Committee. The attention of the central staff and managers of local associations is concentrated on improving the supply of potatoes, vegetables and fruits in a wide assortment for the population, reducing losses of output and eradicating cases of mismanagement.

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CSO: 1824/172

## LIVESTOCK

### REVIEW OF 1983 LIVESTOCK PRODUCTION, PROCUREMENTS BY AREA

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 12, Dec 83  
pp 1-3

Article: "Animal Husbandry Reserves -- For Fulfilling the Five-Year Plan"

Excerpt In 1983, considerable increases were achieved in the production and procurements of milk, meat and eggs by livestock breeders in the Lithuanian, Azerbaijan, Estonian, Belorussian, Latvian and Turkmen union republics, in the Bashkir, Tatar and Mari ASSR's, in Krasnodar and Khabarovsk Krays, in Leningrad, Moscow, Ulyanovsk, Sakhalin, Tomsk, Tyumen, Penza, Perm Dnepropetrovsk and other oblasts and in many rayons and on farms in the Georgian SSR and the Moldavian SSR and in Vinnitsa, Zhitomir, Orenburg, Kiev, Tselinograd, Tashkent, Saratov and a number of other oblasts. They became winners in the all-union socialist competition for the successful carrying out of the 1982-83 livestock wintering campaign and for increasing the production and procurements of animal husbandry products and they were awarded honorary certificates of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee.

In completing ahead of schedule the fulfillment of the plans for the current year, the agricultural workers in the Armenian, Kirghiz, Turkmen, Azerbaijan, Georgian and Uzbek union republics and in Leningrad, Kiev, Ulyanovsk, Sverdlovsk, Lvov and a number of other oblasts are successfully fulfilling the tasks for three years of the five-year plan for procuring animal husbandry products. However, such an improvement in the operational results in animal husbandry has not been achieved in all areas. A considerable number of farms and rayons, especially in Kalinin, Irkutsk, Yaroslavl, Kostroma, Arkhangelsk, Kursk and Tambov Oblasts were unable this year to make up for the shortfall in farm products experienced in past years and they remain under an obligation to the state with regard to the sale of meat and milk. In a decree of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee, mention was made of a considerable shortfall in meat and milk which occurred during this past winter period in certain rayons and on farms in the Kazakh SSR, Kirghiz SSR, Kalmyk ASSR, Kabardino-Balkar ASSR and Krasnoyarsk Kray and in Rostov, Minsk, Kashka-Darya Oblasts.

This year improvements were realized in the quality of the livestock products procured. Increases were recorded in the weight conditions for cattle, hogs and sheep received for processing from farms in the Estonian, Lithuanian,

Latvian, Uzbek and Moldavian union republics, in the Chuvash and Tatar autonomous republics, in Stavropol and Krasnodar Krays and in Kustanay, Kurgan, Cherkassy, Tselinograd, Ivano-Frankovsk, Chelyabinsk, Tula and a number of other oblasts. Increases also took place in the deliveries of young cattle stock of raised weight conditions to kolkhozes and sovkhozes in the Uzbek, Turkmen, Armenian, Lithuanian and Kazakh union republics. Farms in the Estonian SSR, Latvian SSR, Mari ASSR and in Sverdlovsk, Kirov and the Crimean oblasts are supplying for processing purposes more than 70 percent of the cattle stock considered to be in a high state of nourishment. In improving the technology for the raising and fattening of hogs, a considerable increase was achieved in the average live delivery weight for hogs on farms in the RSFSR, the Belorussian SSR, Lithuanian SSR and in Pavlodar, the Crimean and Chernovitsy Oblasts.

The collective at the Yermentauskiy Rayon specialized farm in Tselinograd Oblast is obtaining a stable average daily weight increase of 900 grams per head and is selling cattle to the state at an average live weight of more than 500 kilograms. The Kolkhoz imeni Buznitskiy in Kiev Oblast, the Progress Kolkhoz in Grodno Oblast and the Sovkhoz imeni Gazeta Pravda in Uralsk Oblast and many other leading kolkhozes and sovkhozes engaged in supplying high quality cattle towards fulfillment of the state plans serve as examples of highly efficient meat production. At the present time, these farms have already reached the goal established for fattening the cattle to a weight of up to 450-500 kilograms.

However, by no means are the kolkhozes and sovkhozes in all areas supplying such high quality cattle towards fulfillment of their plans. Just as in the past, low weight animals are being shipped to the meat combines by farms in the Kirghiz, Georgian and Tajik union republics, in the North Ossetian and Buryat autonomous republics and in Novgorod, Saratov and Novosibirsk oblasts. The proportion of cattle in a high state of nourishment, supplied by kolkhozes and sovkhozes in Kaluga, Volgograd, Rostov, Smolensk, Ivanovo, Kursk and Amur oblasts, is still low.

In 1983 the quality of the milk being procured improved somewhat. More than 90 percent of the milk being delivered to dairy plants by farms in the Ukrainian, Estonian, Lithuanian and Uzbek union republics, Krasnodar Kray and in Leningrad, Moscow, Murmansk, Sakhalin and a number of other oblasts is of 1st grade quality. At the same time, owing to the low quality of their dairy products, considerable losses are being sustained by farms in the Armenian SSR, the Kirghiz SSR and Kazakh SSR and in Tomsk, Saratov, Arkhangelsk, Bryansk, Kemerovo and Tyumen Oblasts. There have been frequent instances, especially in the Moldavian SSR, the Kazakh SSR, the Buryat and Chuvash autonomous republics and in Gorkiy and Kurgan oblasts wherein, owing to a high acidity level and mechanical contamination, the milk delivered had to be rejected and returned to the farms.

There have also been instances of poor quality work with regard to determining the quality of products purchased and also in maintaining accounts between the procurement specialists and suppliers. The primary obligation of the State Procurement Inspection is to intensify control over mutual computations and protect the interests of the kolkhozes, sovkhozes and the state.

Commencing with the very first days of the livestock wintering period, the livestock breeders of leading farms are taking advantage of all available opportunities for creating a strong foundation for carrying out the plans for the coming year and the 4 years of the five-year plan. Many of the country's kolkhozes and sovkhozes are commencing 1984 with a reliable supply of feed. The increased amount of attention being given to feed production, the improvements in the technical equipping for such work and the use of the latest scientific achievements and leading experience made it possible this year for the farms in the Lithuanian, Estonian, Belorussian and Kazakh union republics and many oblasts in the RSFSR and the Ukrainian SSR to strengthen considerably the feed base for animal husbandry. A reliable supply of hay has been created, with approximately 75 million tons procured throughout the country. The supplies of coarse, succulent and vitamin feed, according to preliminary data, exceeded last year's level by 10 percent by the beginning of the wintering campaign.

The efficient use of available feed is dependent upon the optimum size, structure and breeding qualities of the herd. But there are frequent incidents of farm leaders and specialists failing to display proper concern for raising the pedigree qualities of their cattle. Instead, they increase the size of their herds through the use of low productivity and low pedigree cows which are unsuitable for reproduction purposes.

Improvements in the productivity of cattle during the winter are greatly dependent upon how the preparation of feed for feeding to the animals is organized on the farms. For the purpose of raising the nutritional value of the feed rations for the animals, special importance is attached to the thermochemical treatment of straw and to the preparation of enriched grain forage mixtures. The work being carried out by many farms in augmenting the feed resources through the procurement and use of additional types of plant raw materials is deserving of use on a more extensive scale.

A necessary condition for the successful implementation of the Food Program is the efficient utilization of and improvements in the marketability of the livestock products. In speaking before the November (1982) Plenum of the CPSU Central Committee, the general secretary of the CPSU Central Committee Comrade Yu. V. Andropov emphasized the need for "increased responsibility for the observance of all-state and national interests and for waging a decisive campaign against all violations of party, state and labor discipline."

Together with the specialists of kolkhozes and sovkhozes and agricultural and procurement organs, the workers attached to state inspections are carrying out purposeful work aimed at attracting greater quantities of livestock products into the food fund and exercising control over the correct and thrifty use of such products for intra-farm purposes. This has promoted an increase in the marketability of these products during this current year. But large reserves are still available in this area. Each year, for example, up to 15 percent of the milk is being used for feeding to young livestock and at a number of farms, owing to a lack of control, the consumption of milk for this purpose is constantly increasing.

In order to raise the marketable resources for meat, many kolkhozes and sovkhozes in the Ukrainian SSR are undertaking efficient measures aimed at

curtailing the slaughtering of cattle on the farms. Here, at inter-farm enterprises for the fattening of animals, slaughtering stations are being built which will be capable of supplying the farms with the required amounts of meat products. Enterprises of the meat industry, in accordance with kolkhoz and sovkhoz requests, are carrying out the slaughtering of cattle on a customer basis. These measures have made it possible to regulate and reduce considerably the intra-farm consumption of meat at kolkhozes and sovkhozes throughout the republic. At the same time, meat consumption for intra-farm purposes is exceeding the established limits on farms in the Uzbek SSR, Moldavian SSR, Turkmen SSR and in Tambov, Uralsk, Kalinin and a number of other oblasts.

Workers attached to the state procurement inspections must intensify their control over the use of marketable resources for livestock products at kolkhozes and sovkhozes, carry out persistent work directed towards preventing excessive expenditures of these products and institute timely criminal proceedings against those persons who tolerated spoilage and waste in the use of agricultural products.

Improvements in the organization of work on the farms are of great importance with regard to increasing the production and procurements of livestock products. Here a decisive role will be played by use of the collective contract method. The operational experience of many farms reveals that livestock farms which operate on the basis of collective contracts, all other conditions being equal, obtain 20-30 percent more output. Member of the Politburo of the CPSU Central Committee and secretary of the CPSU Central Committee Comrade M.S. Gorbachev, during a conference in Belgorod in March 1983, noted that: "The introduction of collective contracts must now be viewed as one of the most important trends in the practical activities of agricultural ministries and departments, agricultural scientific-research institutes and professional trade union organs."

Joint interest in the final results of labor must be increased in the collective brigades and farms and in the procurement organizations, each worker must display a greater sense of responsibility for his assigned task and more complete use must be made of the reserves available for increasing the production and procurements of livestock products.

Improvements in the forms for organizing procurements are of tremendous importance in the campaign aimed at combating losses in agricultural products during shipments to the consumers.

The Food Program of the USSR has called for an acceleration in the conversion over to accepting milk, livestock and poultry directly on the farms. Workers attached to the meat and dairy industry and to state procurement inspections, together with the kolkhozes and sovkhozes, have increased their work in this direction. This year the procurement organizations have accepted at the sites and shipped, by means of specialized transport, more than 25 percent of the livestock and poultry and 30 percent of the milk. Construction work has been launched on the farms in connection with the establishment of hard surface access roads leading to the livestock farms, loading sites and equipping the farms with scales, milk storage containers, refrigeration units and also laboratory equipment. The solving of these problems is attracting

a maximum amount of attention by the councils of agroindustrial associations, the activities of which have made it possible to eliminate many departmental barriers and have opened up new opportunities for expanding direct contacts between the procurement, transport and trade organizations on the one hand and the kolkhozes and sovkhozes on the other.

The high level of effectiveness of direct contacts by the procurement specialists with the kolkhozes and sovkhozes is borne out by the operational experience of enterprises of the meat and dairy industry of the Belorussian SSR. Up to 90 percent of the republic's farms which have plans for selling milk and meat are turning their products over at the site for shipment by means of transport equipment provided by the procurement specialists. The specialized Belmyasomoltrans Transport Administration has been created for the purpose of accepting products at the sites; it consists of 20 cost accounting motor transport establishments with 80 branches. With the participation of the procurement enterprises, courses have been organized for training laboratory workers for the kolkhozes and sovkhozes and for instructing the drivers of specialized motor vehicles in the rules for accepting livestock and milk.

Considerable quantities of the products being procured are being accepted directly at the kolkhozes and sovkhozes in the Lithuanian, Moldavian, Tajik, Latvian, Estonian union republics, in Leningrad, Kharkov, Smolensk, Bryansk, Poltava, Tyumen, Ryazan and Belgorod oblasts and in Stavropol, Khabarovsk and Krasnodar krays.

Purposeful work by kolkhozes and sovkhozes and agricultural and procurement organs, jointly with the meat processing enterprises, in connection with expanding the on-site acceptance of livestock, is being performed in Stavropol Kray, where already more than one half of the cattle and 90 percent of the poultry purchased are being accepted at the sites and shipped from the farms by means of specialized motor transport.

However there are many farms and procurement and processing enterprises which are not attaching the proper value to these leading forms for organizing procurement operations. This year, for example, the procurement specialists in Ivanovo, Sverdlovsk, Orenburg and Magadan oblasts have reduced the amount of milk they are accepting directly on the farms. The state procurement inspections did not rise to the occasion here. They were under an obligation to analyze thoroughly those factors which are inhibiting the acceptance of livestock products directly on the farms and, jointly with the procurement organizations, to correct the shortcomings noted.

The importance of making greater use of the opportunities afforded by the subsidiary farms of industrial enterprises and the private plots of the population, in the interest of improving the supply of food goods, is emphasized in the USSR Food Program.

Measures that have been taken in this regard have produced noticeable results. Contracts are now being concluded with kolkhoz members and sovkhoz workers for the raising and purchasing of livestock, poultry and rabbits, they are being provided with tracts for haymaking and livestock grazing purposes and young animals are being made available for sale to them. As a result,

increases are taking place in the production and purchasing of surplus livestock and other products from the private plots of the population. In 1982 the purchases of milk from the population amounted to 3.9 million tons, an increase of 23 percent compared to 1980. During 9 months of this current year the acceptance of milk from individual suppliers increased by a factor of almost 1.5 compared to the same period for last year. A considerable increase took place in the addition to state resources of surplus meat obtained from farms.

More complete utilization of the opportunities afforded by the private plots of the population for increasing the marketable resources of meat and milk in a number of areas is being delayed by the fact that the procurement network for enterprises of the meat and dairy industry and consumer cooperation, particularly in Kalinin, Chernovitsy, Vladimir, Uralsk, Omsk, Ivanovo and Kurgan oblasts is still insufficiently developed. There have been many instances of kolkhozes and sovkhozes, even in the face of non-fulfillment of the plans for selling products to the state, not making sufficient use of the right extended to them for purchasing surplus milk from the population, with such action being credited towards fulfillment of the plan. In a number of areas, especially in remote rural populated points, purchases of surplus products from the population are being carried out in a weak manner by the organizations of consumer cooperation. The state procurement inspections are not devoting sufficient attention to this work. In each village and rayon, the possibility of the population participating in the sale of surplus products should be thoroughly analyzed and the actions of all of the procurement specialists should be coordinated in a manner so as to ensure that during the coming year more complete use will be made of this reserve for increasing the food resources.

In mobilizing all reserves for increasing the production and procurements of livestock products, similar to all agricultural products, an increasing role will be played by the state procurement inspections.

Many examples could be cited illustrating the active work being carried out by the state procurement inspections in connection with the purchases and quality of agricultural products; fine indicators in carrying out procurement work have been achieved by the state procurement inspections for Predgornyy Rayon in Stavropol Kray, Abashskiy Rayon -- Georgian SSR, Korenovskiy Rayon -- Krasnodar Kray, Molodechnenskiy Rayon -- Minsk Oblast, Sredneakhtubinskiy Rayon -- Volgograd Oblast and many others, the operational experience of which warrants dissemination on an extensive scale.

At the present time, the kolkhozes and sovkhozes, procurement organizations and state procurement inspections are carrying out preparatory work in connection with the drawing up of contractual agreements for agricultural products for 1984. In the meantime, a need exists for ensuring that the fulfillment of the state's order for agricultural product deliveries in the proper quantities, assortment and quality is fully supported in the form of practicable production planning for it at the kolkhozes and sovkhozes.

There can be no doubt but that the workers attached to procurement organizations are capable of handling the tasks assigned to them and will make a worthy contribution towards implementing the Food Program of the USSR.

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YEAR-END ASSESSMENT OF LIVESTOCK SECTOR PROGRESS, PROBLEMS

Moscow ZHIVOTNOVODSTVO in Russian No 12, Dec 83 pp 2-6

Article: "Commencing the Fourth Year of the Five-Year Plan"

Text The third and pivotal year of the Eleventh Five-Year Plan is coming to a close. The agricultural workers, similar to all of our Soviet people, have greeted the 66th anniversary of the Great October with new labor successes. The workers on livestock farms made a worthy contribution towards implementing the country's Food Program. This year the kolkhozes and sovkhozes achieved a considerable increase in the productivity of their animals, they increased the production and sale to the state of meat, milk and eggs and they brought about further improvements in the quality of the products being produced.

Over a period of 10 months the state procurements of livestock and poultry for the country as a whole increased by 7 percent compared to the same period for last year, milk -- by 10 and eggs and wool -- by 4 percent. This was the highest level for procurements of livestock products recorded in recent years.

The fine rates of growth for milk procurements on farms in the RSFSR, the Ukraine, Moldavia and the Baltic republics are deserving of mention.

The workers on farms in Cherkassy Oblast -- the initiators of the all-union socialist competition among livestock workers for more complete use of the reserves and opportunities available for increasing the production and production of livestock products and for improving considerably the quality indicators and branch efficiency -- are confidently increasing their production of goods. Here the purchases of livestock and poultry have increased by 6 percent compared to last year and milk -- by 8 percent.

Substantial improvements were achieved this year in the indicators for livestock productivity. Over a period of 9 months the average milk yield per cow at kolkhozes and sovkhozes throughout the country increased by 141 kilograms. The average weight for one head of cattle sold to the state increased by 14 kilograms and reached 363 kilograms and hogs -- by 4 kilograms (109 kilograms).

At the same time, the numbers of livestock and poultry increased. On 1 October there were 1.8 million more head of cattle at kolkhozes and sovkhozes than there were on this same date last year, hogs -- an increase of 2.4 million,

sheep and goats -- by 2.4 million, poultry -- by 17.5 million head. Increases took place in the output of young stock and improvements realized in protecting them.

The successes achieved were primarily the result of a tremendous amount of work carried out by the party and government in raising the efficiency of agricultural production. During the period which has elapsed since the May (1982) Plenum of the CPSU Central Committee, it has become apparent that greater attention is now being given to solving the problems of the agrarian sector and more responsibility is being displayed with regard to solving the tasks assigned by the country's Food Program and not only in the branches of the agroindustrial complex but also in all branches of the national economy.

The results achieved this year in developing the branch are gratifying beyond any doubt. However, this should not provide any basis for complacency. The agricultural organs, kolkhozes and sovkhozes must carry out a great amount of work aimed at further increasing the production of meat, milk and other products, not only in the interest of fulfilling the plans for 1984 but also for reducing substantially the lag which developed during the first two years of the five-year plan.

In addition to displaying concern for protecting the animals, this requires a conversion over to the use of intensive methods for the carrying out of livestock operations in all areas, a considerable increase in the productivities of all types of livestock and poultry, an increase in the level of selection-breeding work and improvements in reproduction of the herd.

We have many examples of highly efficient production organization. An average of more than 3,000 kilograms of milk per cow is being obtained this year by livestock breeders in the Estonian SSR, Karelian ASSR, Leningrad and Moscow oblasts and in many regions of the RSFSR, the Ukraine, Lithuania, Latvia and Belorussia. Many kolkhozes and sovkhozes in Estonia, Lithuania, Uzbekistan and in Kurgan, Chelyabinsk, Cherkassy, Kustanay and some other oblasts are selling cattle for meat purposes at a live weight of 400 kilograms or more. Examples of fine organization in the raising and fattening of cattle are to be found at the Kolkhoz imeni Shevchenko in Umanskiy Rayon in Cherkassy Oblast and at the Gorodeyskiy Sovkhoz in Nesvizhskiy Rayon in Minsk Oblast, where the average daily weight increases in the animals are in excess of 800 grams, with these high indicators being obtained on the basis of internally produced feed. This makes it possible to sell the animals when they are one and a half years of age at an average weight of not less than 430 kilograms.

Such results were achieved as a result of a number of factors: purposeful work aimed at strengthening the feed base, the efficient use of feed resources, the introduction of the collective contract and other progressive forms for organizing labor on the farms and raising the interest of each livestock breeder in achieving high production indicators.

At the same time, cattle productivity continues to remain at a low level in a number of areas. Many farms in Georgia, Kazakhstan, Azerbaijan and in Kalinin, Orel, Tambov, Astrakhan and Chita oblasts, over the past few years, have been obtaining on the average less than 2,000 kilograms of milk per cow. In a

number of regions the weight conditions for the cattle are lagging behind the planned indicators. The average weight for one head of cattle sold to the state on some farms in Tajikistan, Armenia and in Novgorod, Ivanovo, Kalinin, Kaluga, Kostroma, Saratov, Vitebsk, Dzhambul and Chimkent oblasts is only 300-335 kilograms and in Georgia, Azerbaijan, Kirghizia, Dagestan and the North Ossetian autonomous republics and in Astrakhan and Mangyshlak oblasts it does not exceed 300 kilograms.

Large shortfalls in output are being sustained in swine husbandry mainly owing to the fact that the average daily weight increases during fattening continue to remain extremely low. On many farms in Kirovograd, Nikolayev, Odessa, Kursk, Orel, Kaluga, Guryev, Chimkent, Taldy-Kurgan and Aktyubinsk oblasts, the increase in the live weight of hogs during fattening is only 200-250 grams. The chief reasons for unsatisfactory work on the farms of these establishments: insufficient feed for the livestock, low quality of the feed, a lack of balance in the rations in terms of protein and other substances, violations of the technological regimes for managing the branch.

Fine prerequisites have been created this year at many kolkhozes and sovkhozes for increasing the production and sale to the state of animal husbandry products. The party, soviet and agricultural organs in the various areas have carried out a great amount of work in connection with motivating the agricultural workers into making more complete use of the reserves and opportunities that are available for increasing the procurements of feed. Compared to last year, considerable increases have taken place in the procurements of hay, haylage, silage, food roots and granulated and briquetted feed.

During the winter the available feed must be utilized in an intelligent and thrifty manner in the interest of obtaining more output with reduced expenditures of forage.

A great amount of experience has been accumulated at the kolkhozes and sovkhozes in organizing the preparation of feed for feeding to the animals and extensive use should be made of this experience on each farm in conformity with the specific conditions. At the present time, practically all of the farms have feed preparation shops and conditions are available for carrying out the thermal processing of coarse feeds and for preparing feed mixtures. Here we wish to ensure that each kilogram of feed is delivered to the livestock in processed or a well prepared form. Only if this is done will it be possible to count upon receiving a maximum return from the feed in the form of output.

And during the winter it is possible to augment the feed resources: by organizing procurements of green coniferous needles and preparing a coniferous meal from them, collecting the waste products of the food industry and food scraps from cities and populated points.

The creation of a strong feed base is included among the priority tasks for 1984, the solving of which will ensure a considerable increase in the production of livestock products.

At the same time, a great amount of work remains to be carried out in connection with improving the quality of the feed. First of all, there is a need for reducing nutrient losses during feed procurement and storage operations through the extensive introduction of progressive harvesting technologies for forage crops, the construction of good quality feed storehouses and the use of chemical preservatives in all areas.

Special concern should be displayed for supplementing the supplies of feed protein. Science and practical experience have proven that, owing to a shortage of protein in the rations, up to 20 percent of the nutrients included in feed is not being utilized fully by the animal organisms. As a result, 40-45 billion more feed units are actually being consumed annually for the production of products than the amounts called for in the physiologically sound norms.

In order to increase the production of feed protein and lower the unproductive expenditures of feed, a substantial change is required in the structure of the sowing areas for forage crops -- the proportion of leguminous grass sowings should be raised considerably and the production of grain forage from pulse crops -- peas, soybeans, rape and fodder beans -- should also be increased. The task has also been assigned of increasing the production of corn, barley and oats.

An increase is also required in the return from each of 66 million hectares of arable land being used for forage crops, since the cropping power for feed areas on many farms continues to remain low, with the average for the country being 2,100 feed units. An increase must be achieved in the production of feed through the use of secondary and intermediate sowings of forage crops, especially in the republics of Central Asia.

Natural feed lands constitute an important reserve for increasing the production of coarse, succulent and green feeds. With regard to the overall area of agricultural lands, the proportion of haying and pasture land at kolkhozes and sovkhozes throughout the country is 58 percent, in the Kazakh SSR -- 81 percent, Uabek SSR -- 84 percent, Kirghiz SSR -- 87 percent, Turkmen SSR -- 96 percent and the Georgian SSR -- 67 percent. At the same time, the productivity of the natural haying and pasture lands has not increased in recent years, with the hay yield amounting to an average of 6-6.3 quintals per hectare.

A complex of measures should be carried out aimed at sharply increasing the feed capability of pastures in regions of remote animal husbandry operations.

Special concern must be displayed for improving the use of irrigated lands in behalf of forage crops. There are presently 6.5 million hectares of such land, including more than 3 million hectares being used for alfalfa. The experience of many kolkhozes and sovkhozes reveals that it is possible to obtain 2-3 or more yields annually from such lands and to produce a large quantity of coarse and succulent feed.

The structure of areas under crops, including irrigated lands, which is not in keeping with the specific conditions found on individual farms or in certain rayons, oblasts and republics, should be changed decisively. In the Georgian SSR, the Tajik SSR and the Armenian SSR the proportion of perennial grass

sowings is being increased only slowly, considerable annual crop areas are being retained and sowings of pulse crops are extremely negligible here.

One of the principles for successful development of animal husbandry operations -- good organization for reproduction of the herd. Improvements in this work can provide tremendous reserves for increasing the production of meat and milk. Some improvements have been carried out this year at kolkhozes and sovkhozes with regard to reproduction of the herd and protection of the animals. However there are still many farms where, owing to a high degree of barrenness in their cows and low indicators for the reproduction of hogs and sheep, are annually failing to obtain the desired number of calves, young pigs and lambs and this is resulting in a shortfall in output. In 1982, more than 81 calves were obtained per 100 cows on farms in many of the autonomous republics, krays and oblasts of the Russian Federation, but at the same time the yield of calves in the Tuva ASSR and in Ryazan, Smolensk, Tambov and Rostov oblasts was less than 70 head. Herd reproduction operations have been organized in an unsatisfactory manner on a number of farms in the Dzhezkazgan, Kokchetav and Tselinograd oblasts of Kazakhstan, the Georgian SSR and in the Azerbaijan SSR, where in recent years less than 71 calves have been obtained per 100 cows.

Experience testifies to the fact that high outputs of young stock are obtained in those areas where daily concern is displayed for all problems concerned with herd reproduction work and where this work is organized in a skilful manner. Over a period of a number of years, the yield of calves per 100 cows on farms in Ivano-Frankovsk, the Crimean and Fergana oblasts has been 91-94 head. For the past 5 years, more than 50 percent of the farms in Lvov Oblast have obtained no less than 95 calves and for the oblast as a whole the calf yield throughout this period was 92-93 percent.

Low indicators for the reproduction of hogs and sheep continue to persist in a number of republics and oblasts.

The solving of these complicated and responsible tasks is associated to a large degree with the need for improving the maintenance conditions for the animals, eliminating organizational problems on the farms and introducing progressive technologies and new forms for organizing labor in animal husbandry.

This important work does not require great capital expenditures. Here a need exists mainly for efficient organization of zooveterinary services for the livestock and strict observance of the technological regimes for production.

In dairy cattle husbandry, constant attention must be given to those problems concerned with the introduction of a flow line-departmental system for milk production and reproduction of the herd. At the present time, 6.6 million cows have been converted over to this technology at kolkhozes and sovkhozes throughout the country. A need exists for improving the work of introducing a flow line-departmental technology into operations in many oblasts of the RSFSR, the Ukraine, Kazakhstan (especially in Novgorod, Pskov, Tambov, Donetsk and Semipalatinsk oblasts), the republics of Central Asia and the Trans-Caucasus.

Each livestock breeder is aware that the raising of healthy young stock serves as a guarantee for high productivity in future cows. In this regard, great importance is attached to the construction of birthing departments and veterinary dispensaries on all of the dairy farms. At the present time, the kolkhozes and sovkhozes are for the most part being provided with livestock facilities. Thus all of the opportunities are available for completing the construction of these installations on each farm during the next few years. Special attention must be given to the construction of birthing facilities and veterinary dispensaries on farms in the Belorussian SSR and in Ryazan, Tula, Kaluga, Smolensk, Yaroslavl, Zhitomir, Nikolayev and Kirovograd oblasts, where the requirements for such facilities are being met by only approximately 50 percent.

The zooveterinary specialists must exercise constant control over the specialized raising of heifers and non-calving young cows. In many rayons and oblasts this work is still not being carried out on a satisfactory basis. Each year, owing to unsatisfactory feeding and maintenance conditions, a portion of the heifers over two years of age remain non-inseminated and are sold for meat purposes. Approximately 70 percent of the replacement heifers are inseminated at the age of 24-30 months (instead of 16-18 months) in the Georgian SSR, Turkmen SSR, Tajik SSR, Armenian SSR and more than one half -- in the Mordovian ASSR, Chuvash ASSR, Pskov, Kaliningrad, Tambov, Zaporozhye, Kherson, Semipalatinsk, Kzyl-Orda, Guryev and a number of other oblasts.

More than 2,250 specialized farms and complexes have been organized and are presently in operation throughout the country. Last year almost 1.3 million non-calving young cows and first heifers were raised at these facilities. On farms in Ivano-Frankovsk, Zhitomir and Ternopol oblasts, 60-80 percent of the non-calving young cows raised at specialized farms are being added to the principal herds and in Moldavia practically all of the non-calving young cows are being raised on such farms.

At the same time, serious shortcomings are being noted in the work of specialized farms for the raising of non-calving young cows, especially in the Chuvash ASSR, Krasnodar Kray and in Kalinin, Kostroma and Donetsk oblasts, where the average daily weight increases in heifers quite often is only 270-300 grams and the average weight of non-calving young cows at time of sale -- 310-320 kilograms. And it is by no means an accident that these non-calving young cows, upon becoming first heifers, produce only slightly more than 1,700 kilograms of milk annually.

Special importance is being attached at the present time to exercising strong control over the work of specialized farms and other farms engaged in the specialized raising of replacement young stock and creating proper feeding and maintenance conditions, in the interest of ensuring the insemination of a maximum number of heifers during the 1st quarter of 1984.

On a number of farms and in a number of rayons and oblasts, cows which have been rejected as being unsuitable for reproduction are unjustifiably being held over until the new year. As a result, no offspring are obtained from the cows, the state of nourishment in a majority of the cows declines during the winter period, a reduction takes place in the meat resources and considerable

quantities of feed are consumed in vain. In particular, many cows are being held over in this manner on farms in Armenia, Georgia, Azerbaijan and in Kalinin, Orel, Ivanovo, Lipetsk, Kursk and some other oblasts.

A large reserve for raising the productivity of livestock is that of well organized breeding work. In recent years a considerable increase has taken place in the number of pure-bred animals, with more improved use being made of imported pedigree animals.

The breeding network presently includes more than 1,400 breeding farms for cattle husbandry, swine husbandry and sheep raising. Large-scale stations for the artificial insemination of animals have been built and are now in operation and immunogenetic laboratories and a network of breeding centers have been created.

Many examples of highly organized breeding work could be cited. At the Zarya Kommunizma Breeding Plant in Moscow Oblast, an average of 5,500 kilograms of milk is being obtained from 3,000 cows. Last year the Petrovskiy Breeding Plant in Leningrad Oblast obtained 6,361 kilograms of milk per cow from its herd of 1,000 cows. More than 5,700-6,000 kilograms of milk per cow annually and 92 calves per 100 cows are being obtained at the Perm Stud Farm. More than 600 breeding farms are realizing milk yields of more than 4,000 kilograms per cow annually and 33 farms -- more than 5,000 kilograms.

However it bears mentioning that in recent years the pedigree and productive qualities of the animals raised have declined at a number of breeding plants. Many kolkhozes and sovkhozes are importing large numbers of pedigree cattle and yet these valuable animals are not bringing about serious improvements in the productivity of the herd.

Imported cattle are not being utilized in an efficient manner on many farms in the Georgian SSR, Azerbaijan SSR, in individual oblasts of the Ukraine and Kazakhstan, in the Checheno-Ingush, North-Ossetian, Dagestan and Mordovian autonomous republics or in Volgograd Oblast.

Improvements are required in organizing the use of bulls. There are presently 22,000 bulls at artificial insemination stations, but the evaluations of these animals for productivity and quality of offspring are being dragged out unjustifiably in individual republics. Compared to farms in the Baltic republics where the proportion of cows and heifers inseminated with the sperm of bulls has reached 75-80 percent, in the Kazakh SSR and the Moldavian SSR this indicator does not exceed 15 percent, the Kirghiz SSR -- 12 and the Uzbek SSR -- 9 percent. This work is poorly organized in the Georgian SSR, Azerbaijan SSR, Armenian SSR and Turkmen SSR.

Large tasks must be solved in connection with increasing the production of milk. A chief reserve for increasing the production of beef is that of raising the live weight of cattle sold for meat purposes. In recent years, a considerable portion of the young stock has been delivered at weights in excess of 400 kilograms. But at the same time, unfattened cattle weighing an average 270 kilograms are being supplied for slaughtering purposes by farms in a number of oblasts. Computations indicate that raising the weight of one head of

young stock to 400-450 kilograms during fattening would make it possible to obtain 1-1.5 million additional tons of beef in live weight.

The creation of mechanized fattening sites and specialized brigades which operate on the basis of collective contracts should be introduced into operational practice on a more extensive scale.

A great amount of work must be carried out in connection with raising the efficiency of swine husbandry. A need exists first of all for carrying out substantial improvements in the feeding and maintenance conditions for young stock, for establishing proper order in selection-breeding work, in organizing reproduction of the herd and in the raising of young stock. The number of swine husbandry farms needed for meeting the requirements for young pigs for the private plots of sovkhoz and kolkhoz workers should be created in each rayon.

Great reserves are to be found in sheep raising. Here there is also a need for improving the organization of herd reproduction operations and for protecting the animals and also for introducing intensive sheep fattening operations. Each year, 46 percent of the sheep delivered to the state by kolkhozes and sovkhozes for meat purposes are in a state of nourishment that is lower than average. In the Moldavian and Georgian SSR's, the average weight of sheep sold is only 20-24 kilograms. An increase in the average delivery weight for the animals of 10 kilograms (up to 45-46 kilograms) would make it possible, for the country as a whole, to obtain 200,000-250,000 additional tons of mutton in live weight.

Samarkand Oblast can be cited as an example of fine organization in the raising and fattening of sheep. Here, over the past 3 years, the average weight of one sheep sold to the state exceeded 40 kilograms, with 85 percent of the animals being delivered in a high state of nourishment following fattening at the Katta-Kurgan Fattening Complex.

At the present time, approximately 1,800 large-scale sheep fattening sites and complexes have been created throughout the country and yet many of them, owing to a weak feed base, are operating in an inefficient manner. The agricultural organs and the farm leaders and specialists must develop and implement, for each sheep raising farm, a complex of measures aimed at strengthening the feed base and creating proper conditions for the raising and fattening of animals.

The tense 1984 plans for the production and sale of livestock products to the state require substantial improvements in the work of zooveterinary specialists, brigade leaders and the heads of farms.

The chief task at the present time consists of staffing the livestock brigades and farms with concerned and knowledgeable workers and, within the collectives, raising the mutual exactingness and responsibility of each individual for his assigned sector and for the final results of his labor.

An all-union review of labor organization and the culture of production in animal husbandry has been announced for carrying out throughout the country.

Many farms in the Baltic republics and in Moscow, Leningrad, Kiev and other oblasts have joined in actively carrying out this review. The agricultural organs, farm leaders, the komsomol and professional trade union organizations of kolkhozes, sovkhozes and enterprises of the agroindustrial complex must ensure active participation by the labor collectives in the all-union review. This will make it possible to fulfill successfully the tasks for 1984 and also those for the 11th Five-Year Plan as a whole.

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## LIVESTOCK

### ADMINISTRATIVE CONFLICT OVER SALE OF PEDIGREE LIVESTOCK IN UKRAINE

Moscow IZVESTIYA in Russian 21 Dec 83 p 4

/Text/ Article by V. Vukovich, special correspondent of IZVESTIYA: "As an Exception"; reference article from IZVESTIYA, 22 Oct 83 was published in USSR REPORT: AGRICULTURE, JPRS 84938, No 1414, 13 Dec 83 p 71/

/Text/ First we will recall what was discussed in the article "Strife Over an Auction" published in IZVESTIYA (No 294/295). Having fulfilled the state assignment for the deliveries of young pedigree cattle, Lvov kolkhozes with the permission of the council of the oblast agroindustrial association organized, as during past years, an auction. They sold heifer-calves of the black and white breed, which remained after the fulfillment of the sale plan, at it. There were less than 4,000 of them--a set for one good section. However, the Ministry of Agriculture forbade the people of Lvov to ship livestock outside the republic's borders.

The editorial department received an answer from M. Khorunzhiy, UkrSSR minister of agriculture, 1½ months after the publication. He does not deny that, according to the statute approved by the USSR Ministry of Agriculture, it is permitted to hold auction sales of pedigree animals. However, the minister writes that, "according to the decree dated 9 July 1980 of the USSR Council of Ministers, the sale of livestock beyond the republic's borders can be held only after the fulfillment of interrepublic deliveries of pedigree and improved productive livestock by the republic." He stated that by 1 November the republic did not cope with the plan for the delivery of pedigree livestock to the all-Union stock. Evidently, this should be understood as a justification of the prohibition of its shipment.

However, Lvov farms have coped with the state assignment ahead of schedule. Why must they, because of others, keep superfluous heifer-calves and expend feed on them, especially on the threshold of winter?

The answer also states that "basically, the sale of livestock was organized not at the auction, but directly on farms with a violation of zooveterinary requirements: Some of the heifer-calves taken from the forward contracting with the population were sold without the determination of the productivity of cows."

We will not begin to clarify where the animals were sold--on farms or at the auction. But how can it be stated that some heifer-calves were sold without the determination of their productivity if the organizers of the auction printed catalogs of animals with their genealogy and prepared pedigree certificates? Otherwise, who would have spent money on them?

What a violation of zooveterinary requirements can be mentioned if before the beginning of the auction all the animals underwent the necessary check. Incidentally, A. Okopnyy, UkSSR deputy minister of agriculture, was present at the auction. There were no remarks on his part.

Nevertheless, in his answer the minister mentions that some of the livestock brought at one time from Lvov Oblast to one of the republics had a positive reaction to tuberculin. Yes, it was so. The offenders were punished. Only this happened several months before the auction.

In conclusion M. Khorunzhiy reports that the "problems discussed in the article 'Strife Over an Auction' have been examined at a meeting of the board of the UkSSR Ministry of Agriculture. Measures for a fundamental improvement in the raising, procurement and sale of pedigree and improved livestock have been outlined and are being implemented. Those guilty of the committed offenses have been punished. As an exception Lvov Oblast has been permitted to ship the pedigree livestock sold at the auction on 20 August 1983, provided zooveterinary requirements are strictly observed."

It is not stated what measures "for a fundamental improvement" it has been decided to take.

The article published 5 years ago "Lessons in Management" (the ministry did not consider it necessary to answer it) and the present "Strife Over an Auction" note that, in order to increase the production of pedigree livestock, thought-out economic incentives are needed. For example, farm managers believe that we should return to the former practice of exchanging concentrates for the highly productive young stock that is sold. We must also give thought to how to financially interest the workers of the oblast pedigree stock association in the overfulfillment of the plan for the procurement of young stock.

Nevertheless, the minister graciously permitted, true "as an exception," the shipment of the livestock sold at the auction outside the republic's borders. However, when signing the answer to the editorial department, the minister must have known that all the heifer-calves of the customers from "other towns" have already been sent away to various oblasts in the Ukraine. The workers of the pedigree stock association are now trying to take away some additional young pedigree stock. They will ship it to customers, but not at the prices formed at the auction held, but at ordinary prices, and, moreover, at a time when it is snowing and freezing outdoors. And lastly, whether the people of Lvov will be able to hold auctions for the sale of above-plan livestock in the future remains a guess.

As we see, efficiency and independence in management at times enter into a conflict with the paragraphs of old enactments and inertia. If the causes are not eliminated here, the conflict may recur. This must not be allowed.

EFFICIENCY OF HOGBREEDING IN COMPLEXES DISCUSSED

Moscow SVINOVODSTVO in Russian No 1, Jan 84 pp 25-26

Article by N. Khoroshilov, chief of the Veterinary Department of the USSR Main Administration of the Livestock Industry: "Raising the Efficiency of Hog Breeding" /

Text A great amount of work is being carried out in our country in connection with carrying out the decisions of the party and government on the further development of hog breeding and converting it over to an industrial basis. At the present time, 548 hog breeding complexes with a capability for producing from 12,000 to 26,000 head annually have been placed in operation.

The complexes are operating at 100 percent capacity. During 7 months of last year the hog breeding complexes sold 1,651,900 hogs to the state at a live weight of 204,200 tons, with the average weight per head being 124 kilograms and the average daily weight increase in the animals during fattening -- an average of 597 grams. For each quintal of weight increase, 4.8 quintals of feed units and 3.3 man-hours were expended and the production cost per quintal was 105.6 rubles. On the average, 94 percent of the animals at the complexes were protected up to the turnover point and in the case of young stock up to 4 months of age -- 91 percent. A raised loss in young stock was experienced at some complexes.

The best production indicators were achieved at the following complexes: imeni 60-Letiya BSSR in Minsk Oblast, Industrial'nyy in Krasnodar Kray and Krasnogorskiy Nos. 1 and 2 in Chelyabinsk Oblast.

The collective of the complex imeni 60-Letiya BSSR delivered 64,100 head for slaughtering, with the average weight of one animal being 127 kilograms, it fulfilled its plan for selling meat to the state by 105 percent and it obtained the highest average daily increases in animal weight during fattening -- 676 grams.

The Industrial'nyy Complex sold 69,100 hogs to the state at an average weight of 118 kilograms per head, it fulfilled the state plan by 115.1 percent, it realized an average daily increase in animal weight during fattening of 663 grams and per quintal of weight increase it expended 4.2 quintals of feed units and 2.2 man-hours of labor.

The collective of the complex Krasnogorskiy Nos.1 and 2 is performing in a stable manner. Over a period of 7 months, 16,900 tons of pork in live weight were sold to the state and the sales plan was fulfilled by 8.9 percent.

The following complexes coped with their production programs: Permskiy in Perm Oblast, Chistogorskiy in Kemerovo Oblast, Luzinskiy and Chunayevskiy in Omsk Oblast, Kudryashevskiy in Novosibirsk Oblast, Kalityanskiy in Kiev Oblast, Kommunist in Vologda Oblast Pervomayskiy in Krasnoyarsk Kray, Nekrasovskiy and Dzemginskiy in Khabarovsk Kray, Novo-Anninskij in the Moldavian SSR and the Sovkhoz-Technical School imeni Gagarin in the Estonian SSR.

Such farms at the Sovkhoz-Combine imeni 60-Letiya BSSR in Minsk Oblast, the Sovkhoz-Combine imeni 50-Letiya SSSR in Gorkiy Oblast, Industrial'nyy in Krasnodar Kray and Luzinskiy in Omsk Oblast exceeded their planned levels for pork production. Each year they produce 13,600-14,800 tons of pork in live weight and obtain 9.1-9.5 suckling pigs per farrow and 640-675 grams of average daily weight increase during fattening operations.

In 1982, a large number of other enterprises with capabilities for raising 12,000, 24,000, 54,000 and 108,000 head annually achieved their planned levels for pork production volume based upon improvements in the productivity of the animals.

On the whole, the productivity of hogs at complexes was higher by a factor of 1.5-1.7 than that at conventional farms, the consumption of feed per quintal of weight increase was accordingly lower, the brood stock was utilized 35 percent more intensively, labor expenditures were less by a factor of 4.6 and the production of a weight increase in the hogs was 25-30 percent cheaper.

However, it bears mentioning that full use is still not being made of the reserves that are available for raising productivity and protecting the hogs.

At some complexes, especially kolkhoz and inter-farm facilities having capabilities for raising from 12,000 to 24,000 head annually, the productivity of the hogs is still low and at times the losses in young stock are quite high.

Such complexes are to be found in Moldavia, Kazakhstan, the Ukraine and in some oblasts in the Russian Federation.

Of those complexes which tolerated reductions in the productivity of their animals and did not achieve the planned volumes for the production and sale of pork to the state, the following warrant special mention: Malinovskiy in Krasnoyarsk Kray, Gubkinskiy in Belgorod Oblast, Kuznetsovskiy in Moscow Oblast, Kremenskoy in Voroshilovgrad Oblast, Volynskiy in Karaganda Oblast, Gallya-Kuduk in Tashkent Oblast and some other farms.

Experience has shown that the basis for achieving the planned pork production volumes and other technical-economic indicators is strict observance of the production technology: ensuring the availability of rich feed for the animals, the use of high quality animals for brood stock at the complexes, continuous operation of the equipment and mechanisms, the creation of an optimum micro-

climate and efficient observance of the technological methods and zooveterinary rules at each production sector and working position.

It is generally well known that in carrying out their work the complexes encounter objective difficulties in their daily veterinary activities. This includes failure of the mixed feed to meet the established requirements, imperfections in some of the equipment and mechanisms, insufficient study of certain diseases, shortage of highly productive pedigree animals, shortages of disinfection means, medications and vitamins, high degree of labor intensiveness for veterinary treatments and so forth. These and many other difficulties are common to all of the complexes. However, the operational results differ even though the conditions are the same. It is our opinion that high production indicators for hog productivity and maintenance are achieved at those complexes where maximum use is being made of the available reserves, where the accepted technology is being observed in an accurate manner and where the zooveterinary service is solving the tasks confronting it at the proper level.

In carrying out this great work, exceptional importance is attached to the role played by preventive measures. The operational experience of the complexes reveals that the greatest amount of harm is caused by gastro-intestinal diseases arising mainly as a result of poor quality feed. Agalactia in the sows is a serious cause of loss of young pigs during the first days of their lives. Disruptions in the feeding and maintenance of the sows also constitute an etiological factor. Considerable losses can occur as a result of anemia in the young pigs. Imperfections in the stalls often lead to injuries in the young stock. Infectious diseases can arise as a result of violations of the rules for staffing the complexes with animals, failure to observe the zoohygienic maintenance conditions and failure to carry out anti-epizootic measures.

The losses being sustained in the number of hogs at the complexes, especially in suckling pigs, are disturbing to all of us, notwithstanding the fact that these losses are no higher than those being experienced in economically developed countries in the West. Here are several examples. According to available literature, the losses in young pigs in the U.S.A. in the late 1970's, between birth and weaning, amounted to from 15 to 30 percent. On the average, 2 pigs in each litter perished. The mortality rate for suckling pigs in Canada is 20-25 percent, in Great Britain -- 15, in France -- 25, in Australia -- 19, Hungary -- approximately 15 and in Romania, Italy and Norway -- approximately 20 percent. Specialists in the FRG believe that 26 percent of the young pigs perish as a result of diseases of the digestive tract, 24 percent -- from suppression of the sows and 36 percent -- from disturbed growth and development owing to agalactia in the sows.

The data cited testifies to the fact that the safeguarding of hogs at complexes in our country is considerably higher than at any other country in the world. However, we have reserves for further raising productivity and improving the maintenance of hogs.

These reserves consist mainly of the following: strict observance of the accepted technology, more complete use of scientific achievements and leading

practice in the feeding, maintenance and breeding of animals and efficient planning and implementation of anti-epizootic measures.

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## LIVESTOCK

### PROGRESS, PROSPECTS OF LITHUANIAN MILK, MEAT PRODUCTION

Moscow SEL'SKAYA ZHIZN' in Russian 16 Dec 83 p 2

[Article by M. Grigalyunas, agricultural minister of the Lithuanian SSR:  
"Prior to the Next Step"]

[Text] There are facts that speak for themselves. I feel that the following is one of them. Already in late October the livestock farmers of Lithuania had successfully met their annual quota for the sale of milk to the state. Moreover, 91 percent of the milk sold was first quality. In all regions of the republic the productivity of animals is higher than last year. The course of overwintering of animals provides us with a basis for hoping for a good end to the year--according to preliminary calculations, there will be a yield of 3,150 kilograms of milk per cow.

If we consider that last year this indicator equalled 2,977 kilograms, then the increase is quite weighty. However, if we compare it to the results achieved by workers of dairy farms during 1977, when milk yield equalled 3,367 kilograms, it becomes clear that we still have some unused reserves. And they are considerable. It is on these two planes that we will summarize the year's results.

The main link in dairy production is undoubtedly the labor collective. It is no accident that a great deal of attention is now being given to farm workers and to creating more favorable work conditions for them. On all farms in the republic there has been a transition to milking twice per day and a clear division of labor has been instituted. Over half of the milkmaids bear the title of master of livestock raising. In those places where stable collectives have developed brigade contracts are being implemented. Firmly convinced of the effectiveness of the new form of organization and reimbursement of labor are the livestock farmers of the Perloyskoye Experimental Enterprise of Varenskiy Rayon, the Kolkhoz imeni Kalinin of Prenayskiy Rayon, the Pirmin Kolkhoz of Shyaulyayskiy Rayon and many other enterprises.

The experience of the last of these should be examined more closely. L. Bakanauskene, L. Meldaykene, A. Grishkute-Yuozunaytene--the list of names of milkmaids from the Pirmin Kolkhoz who produced over 600 tons of milk in a year could have been longer. Having introduced collective contracts, the enterprise's livestock farmers are maintaining a high productivity level in

cows with stability. The means for accomplishing this have been previously tested--full-value and balanced rations, differentiation in feeding animals, and a constant and systematic concern for the development and replenishment of the dairy herd. The result of this is that over 80 percent of the cows here belong to the category of elite-record setting animals. Thus it is not surprising that in the Pirmin Kolkhoz quotas are filled ahead of time--to produce 4,000 kilograms of milk per cow.

In the example of the Pirmin Kolkhoz, as in a drop of water, were reflected those gratifying processes and changes that are occurring today in the republic's dairy industry. First of all, in feed production there is an efficient and careful use of each kilogram of forage. A convincing confirmation of this is the reserve with which we entered the stall-upkeep period of livestock maintenance. The procurement per cow comprises 19 quintals of hay and grass chaff, 24 quintals of haylage, 52 of silage and 16 of root crops. Everything has been planned to make sure that feed is given to animals only in a prepared form, which undoubtedly increases the return on rations. Quite a few enterprises--about 200--provided themselves with powerful feed shops, among which the KORK-15--an automated complex for the preparation of moist feed mixtures--was outstanding. In places where the building of such shops is still in the future feed-preparation platforms manage to do the job with the use of simple technology for the threshing, mixing and flavoring of feeds.

The change achieved in feed production is also valuable in that the shortage of forage and its low quality often became the barrier on the path toward the effective utilization of potential possibilities of the dairy herd. This was particularly vexing because through the efforts of breeders and the zootechnical service of enterprises we were able to develop a highly productive and promising herd in the republic.

The genetic potential productivity of cows of the Lithuanian Black-Spotted breed, the basis of the dairy herd, is 4,000-4,500 kilograms of milk per year. This has not yet been realized in all enterprises. There are many reasons for this. For example, in some kolkhozes and sovkhozes workers are so used to the chronic shortage of forage that they automatically continue to underfeed animals. Cows that do not receive the necessary rations initially will not yield large quantities of milk after calving. And calves produced by these mothers are usually weaker.

In some enterprises little concern is shown for raising calves, which decreases the rate at which heifers mature. Practical experience shows that adhering to these two conditions enables us to increase the productivity of the entire herd. For example, in the Sheshupe Kolkhoz of Kapsukskiy Rayon and the Atzhalinas Kolkhoz of Panevezhskiy Rayon pedigree heifers weigh 370-390 kilograms at the age of 17-18 months and are inseminated at this time. The results achieved by livestock farmers in these enterprises convincingly attest to the advantages of such a technology. Last year in the Sheshupe each primapara heifer produced 4,098 kilograms of milk per 305 days of lactation; in the Atzhalinas --4,091 kilograms.

The experience of leading kolkhozes is attracting more and more supporters in the republic. The following figures are indicative--this year 14 enterprises have already produced over 4,000 kilograms of milk from primapara heifers and 227--over 3,000 kilograms of milk.

A special word should be said about relations with partners within the agro-industrial complex. I will not sin against truth if I say that today they have become more stable and more acceptable to enterprises than 1-2 years ago. Here I mean primarily the relationship between farmers in livestock raising and subdivisions of the republic's Goskomsel'khoztekhnika [State agricultural equipment association] and processing enterprises. The quality of milk depends greatly on the technical equipment on farms and on the state of repairs of milking and cooling apparatuses. The servicing and care of this equipment has been assigned to specialists from Goskomsel'khoztekhnika. Mobile brigades of masters have been created in rayon associations and they bear the responsibility for all this difficult work.

Unfortunately, we do not get by without conflicts. It happens that a particular rayon agricultural equipment association may try to increase the volume of work that is fulfilled, and to receive unearned money from an enterprise. But the new organs of administration--the RAPO [Rayon agro-industrial association]--has already learned to respond quickly to such conflicts and to decide them locally without difficulty. Thus there are no big problems here. Something else is more difficult--republic farms have a great deal of imported milking and cooling equipment. This is the cause of serious difficulties involving spare parts.

Here is another aspect of cooperation with Goskomsel'khoztekhnika. Its rayon associations have done a great deal to raise the professional mastery of farm workers, having organized mobile classrooms where it is possible not only to improve one's qualifications but also to train in a specialty such as operator of machine milking or others that are necessary in the dairy industry. This year about 9,000 persons underwent such training.

Not to be content with what has been achieved--this is probably the main theme of the attitude of Lithuanian livestock farmers. In the near future they must achieve an average yield per cow of 3,500 kilograms of milk. This can be done. Our hopes in this lie not only on those who are directly involved in milk production locally, but on scientists-breeders as well.

In general, Lithuanian livestock farmers are completing the year in a fairly good mood, in a business-like manner, striving to disseminate the experience of leading collectives as widely as possible and to correct the situation in lagging enterprises. They began the overwintering period successfully--the daily milk yield of cows on the average is 200 grams more than last year. Not without reason the people say that a good beginning is half the battle.

## AGRO-ECONOMICS AND ORGANIZATION

### ECONOMIC EFFICIENCY OF RSFSR AGRICULTURAL ENTERPRISES EXAMINED

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 12, Dec 83  
pp 20-22

Article by G. Kulik, chief of the Main Planning and Economic Administration of the RSFSR Ministry of Agriculture: "Raising the Level of Return"

Text The Communist Party of the Soviet Union, during all stages in the carrying out of its agrarian policies, is devoting special attention to the development of agricultural production -- the foundation for growth in the welfare of the people. This is borne out by the annually increasing volumes of capital investments being employed by the state for this vitally important branch of the national economy.

The resources invested in agriculture must furnish a high return, the purpose of which is to ensure steady growth in the production of food products. One means for the effective development of the branch is that of increasing the yield and lowering the production costs for agricultural output, which are dependent upon efficient use of invested resources. This article is dedicated to this problem.

Just slightly more than a year has passed since the new economic conditions, developed during the May (1982) Plenum of the CPSU Central Committee, were placed in operation. How has the economic situation changed and what is the economic atmosphere at kolkhozes and sovkhozes today? Has an increase taken place in the return to the state as a result of the material assistance furnished? Certainly, although only a brief period of time has passed for making a detailed, thorough and comprehensive analysis, nevertheless it is already possible to draw some initial conclusions.

In conformity with the decisions handed down during the May (1982) Plenum of the CPSU Central Committee, with regard to strengthening the kolkhoz and sovkhoz economies in the Russian Federation and increasing their interest in developing production, more than 12.6 billion rubles were allocated for raising the purchasing prices and establishing bonuses for adding on to the prices for low profitability and unprofitable farms. Of this amount, a large portion -- 7 billion rubles -- was used for establishing bonuses for adding on to the purchase prices for chronically unprofitable kolkhozes and sovkhozes.

Such a distribution of funds, allocated by the state for strengthening the farm economies, was fully justified. Within the republic there is a large group of economically weak kolkhozes and sovkhozes which require special and urgent assistance. And they received it. One very important question was for which products should the price bonuses be established for initially.

Prior to commencing this work, the decision was made to listen to the opinions expressed by local organs, particularly specialists attached to rayon agroindustrial associations. For it is precisely here that the principal questions concerned with implementing the country's Food Program and raising production efficiency are being solved. The recommendation was made to bring about improvements in and smooth out the production profitability for livestock products. Actually, in recent years the earnings obtained on many farms in the RSFSR from the sale of milk, meat and other livestock products have not provided the kolkhozes or sovkhozes with any savings, nor have they even covered the expenditures for their production. A rather strange picture emerged: with a shortage of meat and milk in the country, the farm losses increased as the sale of these products increased. Thus, when distributing the bonus amounts for adding on to the purchase prices in the various areas, the decision was made to use 90 percent of the funds allocated for raising the purchase prices for milk, the meat of cattle, pork, mutton and other types of livestock products.

The economic situation in the rural areas changed considerably following the adoption by the CPSU Central Committee and the USSR Council of Ministers of the decree entitled "Improving Economic Relationships Between Agriculture and Other Branches of the National Economy." It is aimed mainly at raising the responsibility of enterprises and organizations which provide services for the kolkhozes and sovkhozes, increasing the production and procurements of agricultural products and improving the quality of work and services rendered.

The interest of these enterprises and organizations in achieving high final results and in increasing the economic efficiency of agricultural production is being raised considerably. Commencing in 1983, it is considered advisable to evaluate the work of Sel'khoztekhnika enterprises based upon an increase in the production of agricultural products and improved labor productivity at farms serviced, compared to the level achieved over the previous 5 years, and also upon the fulfillment of contractual obligations for all types of production-technical support for the kolkhozes and sovkhozes and upon the quality of work carried out and services rendered, while reducing the expenditures required for carrying them out.

An evaluation of the activities of workers attached to Sel'khozhimiya associations will be determined based upon the production of field crop husbandry products at farms serviced on reclaimed lands, compared to the level achieved over the past 5 years, upon the effectiveness of use of fertilizers and plant protection agents and upon fulfillment of contractual obligations for providing agrochemical services for the kolkhozes and sovkhozes.

A description of the work of aquicultural repair-operational organizations and enterprises will be based upon an increase in the production of field crop husbandry products at farms serviced on reclaimed lands, compared to the level

achieved during the past 5 years, upon obtaining the planned cropping power for agricultural crops on newly developed lands and upon fulfilling all contractual obligations for providing services for kolkhozes, sovkhozes and other agricultural enterprises.

An evaluation of the work of procurement enterprises and organizations will be carried out based upon the results of carrying out the state plan for procuring agricultural products, an increase in the procurement volumes compared to the level achieved during the past 5 years and ensuring the preservation and timely processing and delivery of high quality products to the consumers and a reduction in expenditures for their procurement and storage.

Based upon these indicators, funds for issuing material incentives, for socio-cultural measures and for housing construction will be formed at the enterprises and organizations and bonuses will be awarded to the leading workers and specialists. Thus the economic relationships of kolkhozes and sovkhozes with service organizations and enterprises are changing radically.

The measures adopted by the party for raising the efficiency of agricultural production are beginning to produce positive results. What preliminary conclusions can be drawn based upon the operational results for the first 6 months?

Whereas during this same period for 1982, from the sale of livestock products to the state -- and sales mainly took place during this period -- the kolkhozes and sovkhozes in the RSFSR sustained 2.2 billion rubles worth of losses and the profitability level for products sold amounted to minus 13 percent, during the past 6 month period the farms realized a profit of 2.6 billion rubles, with the profitability level for products sold amounting to plus 13.5 percent. It can be stated directly that this is a hopeful fact. For the very first time in recent years the kolkhozes and sovkhozes completed the six month period with a profit. Importance is attached to the fact that the farms obtained a considerable portion of this profit not only from the increase in purchase prices -- and this was certainly a principal factor -- but also as a result of a reduction in the production costs, which in the final analysis is in keeping with the interests of the state. Indeed, in addition to obtaining the planned amount of output, the country does so with reduced production expenditures.

Compared to last year, during 6 months of 1983 the production cost for milk at sovkhozes in the RSFSR decreased by 1 ruble. At first glance this might not seem like very much and yet for the republic as a whole it amounts to a savings of more than 40 million rubles. The expense for producing a quintal of cattle meat decreased by 12 rubles and 10 kopecks and for weight increase in hogs -- by 15 rubles. Certainly, this represents only the first step taken along the path leading to a substantial reduction in production costs and to an increase in the profitability level for production.

This produced an advantage for the state in the form of an increase in meat and milk sales into the state resources by kolkhozes and sovkhozes.

It is completely clear that the state cannot endlessly raise the purchase prices or achieve strong and stable financial and economic indicators. Hence stable growth in the production and procurements of products can only be achieved on the basis of annual support in the form of stable improvements in labor productivity and a reduction in production costs based upon comprehensive intensification of agricultural production.

In recent years the production costs at many kolkhozes and sovkhozes throughout the republic have increased considerably. Whereas during the 1966-1970 period the production of a quintal of grain cost an average of 4.9 rubles, in 1982 -- 9.1 rubles, the production cost for potatoes increased respectively from 6 to 15 rubles, sugar beets -- from 2.4 to 4.4 rubles, milk -- from 17.5 to 34.7 rubles and for a quintal of weight increase in hogs -- from 112 to 209 rubles.

Here, certainly, both objective and subjective factors play a role. However, there is one alarming aspect: many farm leaders and specialists tend to blame the raised production costs only on the increase in prices for industrial goods, raw materials, other materials, fuel and equipment supplied to kolkhozes and sovkhozes and also on an increase in the cost of services provided to the farms by enterprises of Sel'khoztekhnika, Sel'khozhimiya, aquicultural, construction, procurement, transport and other organizations and enterprises. Such an opinion is very widespread and yet we cannot agree with it. It is false and incorrect.

The growth in production costs is associated to a large degree with the fact that the rate of growth in wages at kolkhozes and sovkhozes in many rayons, oblasts, krays and autonomous republics has exceeded considerably the rate of growth in labor productivity and in the production of goods. The introduction of technological innovations into farming or animal husbandry is not always accompanied by a reduction in labor or material expenditures. Many kolkhozes and sovkhozes sustain great losses owing to low cropping power, insufficient livestock productivity, a high degree of barrenness among brood stock and low quality in the products sold to the state. Many farms have still not succeeded in eliminating large unproductive expenditures, theft and the spoiling of products.

Despite the growth that has taken place in labor productivity in agriculture, last year the expenses for wages per 100 rubles worth of gross output amounted to 38 rubles and 74 kopecks compared to 35 rubles and 30 kopecks in 1976. This results from the fact that the rate of growth in average wages at many kolkhozes and sovkhozes has exceeded the growth in labor productivity.

Thus, for example, the conditions for management in Belgorod and Voronezh oblasts and the capital-labor ratio and capital availability for the farms are roughly the same. However, in 1982 the output per worker in agriculture in Belgorod Oblast was 4,800 rubles, an increase of 20 percent compared to the average indicator for the 10th Five-Year Plan. On farms in Voronezh Oblast, one worker produced 4,300 rubles worth of products, which is at the level for the 10th Five-Year Plan. At the same time, the average annual wage in these two oblasts was the same. It is not difficult to imagine how this would adversely affect the production cost indicators for products produced on the farms in Voronezh Oblast.

In Kaluga Oblast the average annual wage for one worker at kolkhozes and sovkhozes is 2,000 rubles and the output -- only 3,600 rubles. With the same average annual wage level, one worker in Vladimir Oblast produced 4,500 rubles worth of products, Smolensk Oblast -- 4,700 and Tula Oblast -- 5,000 rubles worth. It is by no means an accident that the farms in Kaluga Oblast have extremely low economic indicators and high production costs for the majority of types of products being produced.

Kuybyshev and Saratov oblasts, which are neighboring oblasts, have roughly the same production structure, capital-labor ratio and power-worker ratio. At the same time, many economic indicators in Saratov Oblast are considerably lower than in Kuybyshev Oblast. The production expenses per 100 rubles of gross output at kolkhozes and sovkhozes in Saratov Oblast are 157 rubles and in Kuybyshev Oblast -- 130. Moreover, in Kuybyshev Oblast each worker produces 5,200 rubles worth of products for an average annual wage of 1,700 rubles, in Saratov Oblast -- only 4,900 rubles worth and the average annual wage here is 2,000 rubles. Hence the economic indicators are worse.

Here we do not have in mind a reduction in wages for workers engaged in agriculture. Rather, we are discussing another concern -- for growth in wages to be accompanied by unconditional growth in the production and sale of products to the state and for labor productivity in all areas to increase more rapidly than the average wages. Considerable reserves are available in this regard. For example, only 52-62 percent of the tractor operators in Arkhangelsk, Perm and Chita oblasts and in the Chuvash ASSR are fulfilling their output norms. In the Mari ASSR and in Orel, Lipetsk and a number of other oblasts, loafing and absence from work consume more than 20 percent of the working time. Labor expenditures for horse-drawn and manual operations remain high on many farms. These examples testify to the fact that only by improving labor organization and strengthening discipline is it possible to reduce production expenditures substantially and raise the return from resources invested in production.

A considerable portion of the expenses is used for the production of seed and feed, which are obtained at the kolkhozes and sovkhozes themselves and which are purchased in other branches of the national economy. The task of ensuring effective and efficient utilization of material resources is equivalent to lowering expenditures and raising the profitability level and production volumes and, as a result, increasing the sale of products to the state.

As already mentioned, in recent years the material resource expenditures for producing a unit of product not only did not decrease but in fact they even increased in terms of a number of important indicators. There are some who view this as being completely justified, since the prices for industrial products increased. This was partially correct, but not only in this regard. In order to eliminate the effect of prices on growth in expenditures, we will provide data on the expense for producing a unit of output of material resources in natural indicators (see Table).

The kolkhozes and sovkhozes have begun expending more material resources per 100 rubles of gross output than they did several years ago. Naturally, this affected the growth in production costs. Last year, for the republic as a

whole, the farm expenditures for paying for fuel and lubricating materials amounted to 2.3 billion rubles, gas -- 61 million and electric power -- 487 million rubles.

For example, Ivanovo and Vladimir Oblasts operate under the same natural conditions. The workers in Vladimir Oblast are obtaining higher yields for all of their agricultural crops and this naturally requires large transport expenditures and other expenses. At the same time, 10 kilograms of diesel fuel were expended here last year per hectare of arable land cultivated and in Ivanovo Oblast -- 12 kilograms. The farms in Penza Oblast are obtaining grain, potato and vegetable yields which are lower than those in Kuybyshev Oblast and they are expending 8.3 kilograms of diesel fuel for cultivating a hectare of arable land, while at the same time their neighbors are expending only 5.4 kilograms.

TABLE

Expenditures of Material Resources Per 100 Rubles of Gross Output  
at Kolkhozes and Sovkhozes in the RSFSR

Product	Unit of Measurement	1976	1981
Mineral fertilizers in active agent	kg	39.3	63.9
Petroleum products -- total	kg	51.8	56.8
including diesel fuel	kg	34.6	38.3
gasoline	kg	15.1	16.4
Coal	kg	30.2	28.8
Natural gas	km	4.6	6.9
Electric power	kilowatt-hours	52.2	89.1

In recent years the grain crop and sugar beet yields in Kursk Oblast have been lower than those in Belgorod Oblast and fuel is being consumed at a rate that is 1.5 kilograms per hectare of arable land greater than that for neighboring oblasts.

Production costs are also greatly dependent upon the efficient use of material resources.

Thus, on farms in Vologda Oblast the fattening of cattle is well organized and feed is being utilized in an efficient manner. The duration of the period for raising cattle, from birth to delivery, is 20 months here. The average daily weight increases exceed 510 grams. The production cost for a quintal of weight increase last year amounted to 237 rubles.

In Orel Oblast, the cattle were fattened for 33 months prior to being sold. The average daily weight increase -- only 309 grams and the production cost -- 337 rubles.

In 1982 the duration of the hog fattening period in Omsk Oblast was 10 months, the average daily weight increase -- 381 grams and the production cost was 123

rubles and on farms in the Altay Kray the fattening period lasted for 12 months, the average daily weight increase -- 262 grams and the production cost for each quintal -- 211 rubles.

The Nazarovskiy Sovkhoz in Krasnoyarsk Kray is no different from other sovkhozes in terms of its capital availability and power-worker ratio. Thus the fixed productive capital per 100 hectares of agricultural land at this sovkhoz amounted to 28,500 rubles, at a time when the average for Nazarovskiy Rayon was 31,100 rubles and for the kray -- 32,600 rubles.

Mineral fertilizers are being allocated to this sovkhoz in keeping with the level for the average kray indicators and the production costs for all types of products here are some of the lowest in the republic. Last year the production cost for a quintal of milk was 19 rubles and 94 kopecks, while at the same time it was higher than 33 rubles for sovkhozes throughout the kray as a whole and for farms in Nazarovskiy Rayon -- more than 25 rubles.

From year to year the production cost for producing a quintal of beef at the sovkhoz does not exceed 63-65 rubles, or lower by a factor of 2-3 than similar indicators for the kray. As a result, the annual profit for all branches of agricultural production at the sovkhoz exceeds 7 million rubles.

Highly efficient farm operations are based upon a number of factors: constant concern for raising the fertility of soils, improving seed production for all crops, the introduction of modern and leading varieties, the efficient use of organic and mineral fertilizers, the creation of a strong feed base, the introduction of intra-branch specialization and production concentration and the efficient and thrifty use of fixed productive capital. The foundation for a high level of independence and efficiency in all of the structural subunits of a sovkhoz -- the introduction of a simple and reliable technology, constant control and attention with regard to the quality of the products being sold, strict observance of the principles of cost accounting and efficient organization of accounting and control over the expenditure of resources in all areas of production.

Intra-farm accounting is being introduced into operations on an extensive scale on all farms in Stavropol Kray. Here each kolkhoz member and sovkhoz worker is firmly aware that his material reward is dependent upon fulfillment of the cost accounting task, that is, not only upon the fulfillment of the plan for output production but also upon the manner in which the resources allocated and the established limits for material resources are employed.

A common day on which to carry out cost accounting operations has been introduced into operations in regions of this kray. On this day the leaders and specialists of kolkhozes and sovkhozes analyze the financial results of enterprises and cost accounting subunits, uncover shortcomings and areas of neglect and they outline measures for overcoming backwardness and over-expenditures of material and financial resources. This practice has proven its worth.

Unfortunately, this same approach is not being employed in all areas. Last year, for example, only 15 percent of all of the farms in Ivanovo Oblast

employed intra-farm accounting in all of the production subunits and in the Mordovian ASSR -- only 8 percent, in the Dagestan ASSR -- 3, Checheno-Ingush ASSR -- 15, Buryat ASSR -- 13 and in Tomsk Oblast -- 19 percent.

The new organs of administration, such as RAPO's /rayon agroindustrial associations/, have a great amount of work confronting them in connection with improving economic work at the kolkhozes and sovkhozes, lowering production costs and raising the marketability of the products being produced. Strong reserves and opportunities are available here. A reduction of just 1 percent in production expenses at kolkhozes and sovkhozes throughout the republic will make it possible to realize a savings of 550 million rubles.

The kolkhozes and sovkhozes are sustaining considerable losses from the sale to the state of low quality and non-standard products. Last years the farms in Ryazan Oblast were underpaid by 28.3 million rubles, Voronezh -- 46.1, Saratov -- 50.1, Novosibirsk -- 26.2 and in Krasnoyarsk Kray -- 21.8 million rubles.

On some farms, proper control has not been established over the sale of products and serious violations are being tolerated in the preparation of documents. An inspection carried out in Vologda Oblast revealed that farms in Babushkinskiy, Nikolskiy and Nyuksinskiy rayons shipped milk to milk receiving points and dairy plants without preliminary evaluation of the fat content and in many instances without even having weighed the milk in advance. As a result, a loss of 3 million rubles was sustained during the first quarter alone.

In March of this year, the Abganerovskiy Kolkhoz in Oktyabrskiy Rayon in Volgograd Oblast, which performs the function of an inter-farm enterprise, shipped 493 head of cattle the live weight of which was 187.7 tons to the Volgograd Meat Combine. The accompanying documents had not been prepared. The meat combine accepted this young stock at a weight of 176.8 tons. The difference compared to the original weight was 10.9 tons. The farm sustained a loss of more than 36,000 rubles.

The kolkhozes and sovkhozes can obtain more than 2 billion rubles of additional income merely by improving the quality of the products being sold to the state.

At the present time, an economic analysis has just been completed on farms throughout the republic of the operational results for 9 months of this year. These results were thoroughly examined at all of the kolkhozes and sovkhozes and in all of the rayons.

An important measure for promoting a reduction in production costs is that of employing the brigade contract method extensively on farms throughout the republic. Many brigades, detachments and teams which operate on the basis of a single order have already converted over to cost accounting operations. A campaign is underway in such subunits not only to increase the production of goods but also to lower production costs and to increase the volumes of goods being sold to the state -- that is, for the final result.

The first year of work under the new conditions has shown that all of the conditions have now been created in the rural areas for enabling each farm to operate on a profitable basis and to produce high quality products in return for the state resources invested in its development.

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## AGRO-ECONOMICS AND ORGANIZATION

### INTERVIEW WITH COMMISSION OFFICIAL ON APK PROGRESS, PROBLEMS

Moscow SEL'SKAYA ZHIZN' in Russian 27 Dec 83 p 2

[Interview with V. V. Grigor'yev, member, Supreme Soviet Council of the Union Agriculture Commission, chairman, Kolkhoz imeni Kirov, Kalinin Oblast, by A. Chupakhin, correspondent: "The Commission Listened and Recommended"]

[Text] Prior to the regular session of the Supreme Soviet there was a meeting of its agriculture commission. V. V. Grigor'yev, member, Supreme Soviet Council of the Union Agriculture Commission, chairman, Kolkhoz imeni Kirov, Kalinin Oblast, explained to A. Chupakhin, our correspondent, the pressing problems which it examined.

Of course, the main concern of agricultural workers and the entire AIC [Agro-industrial Complex] this year was the fulfillment of the Food Program. The Agriculture Commission summed up the work results of the AIC. All preparatory work was done by a specially created subcommission which was led by Deputy S. I. Manyakin, first secretary of the Omsk Obkom. During this time reports were heard from Gosplan and communications were received from 12 ministries and departments. Ministers and chairmen of USSR state committees participated directly in the subcommission's work.

[Question] What were the results?

[Answer] We feel that this work helped in revealing intra and inter sector reserves, in strengthening coordination and in creating business-like, constructive cooperation between all partners in the AIC. Unfortunately, there is still not the required balance of interests. However, the commission noted positive advances in the AIC's development: its material-technical base is being strengthened, kolkhoz and sovkhoz economies have become more stable and further steps have been taken in the social reconstruction of the countryside.

This year more grain, potatoes, sugar beets, fruit and vegetables were grown and procured than last year. The same can be said about the purchases of milk, meat and eggs. Production has also increased in the AIC's food sectors.

[Question] Did the commission find out what is still hindering the complete coordinated work of all participants in the AIC?

[Answer] Of course. First of all, it results from the deeply ingrained habit of thinking only about oneself and about the interest of one's own sector. There is also the problem that some departments are not working to help agriculture, but obtain profits from it under the pretext that they are also in the complex. I will share the opinion expressed at the session that it is essential to have considerably greater intersector balance and more precise refinement of the very principles of planning the complex's development as a single whole at all levels of administration.

[Question] Could you give some examples of lack of balance?

[Answer] Most likely, everybody has heard about the debate over rye bread. It has been recommended by doctors, who want to return our age-old crop to the fields. Many voters and even farmers were happy about this. Measures were taken: rye grain production and purchases increased sharply. However, rye bread was not baked. All this is because the appropriate ministries and departments were not prepared to use rye flour. Even in 1984 there might be somewhat of an "excess" of grain for the bread baking industry. It is therefore necessary to take additional timely measures. Our commission called upon the responsible organizations to do this. These are, first of all, the USSR Ministry of Procurement and the USSR Ministry of the Food Industry.

[Question] Vyacheslav Vasil'yevich, last year new rural management organs were created. They are entrusted with coordinating AIC member activities on a rayon and oblast level. How does the commission evaluate their successes in this matter?

[Answer] We noted that there has been an increase in the responsibility of farm partners for attaining good final results. There are improvements in production-economic ties and control over accounts has been strengthened. I can see this even at my own kolkhoz. In general, however, a study of agro-industrial association council activities shows that many of them are not genuinely involved in the work and are not completely using the broad powers granted to them.

Our commission also directed the attention of AIC ministries and departments towards the excessively slow management restructuring of RAPO enterprises and organizations. It was recommended that the Ministry of Agriculture more actively study and disseminate the positive experience of agro-industrial associations and assist their councils in improving work styles and methods and in training key personnel for work in the new conditions.

[Question] What agricultural development problems did the commission study and examine?

[Answer] I will mention only the main ones. Improved productivity in crop and animal raising is unthinkable without further improvements in seed raising and breeding. As I have already said, a special subcommission was created to examine this situation. It was necessary to report that the grain crop seed raising situation is unsatisfactory. This year the plan for supplying several thousand farms with seed was not fulfilled. The mass reproduction of new high

yield varieties and hybrids is only slowly under way. Not having their own seed stock, farms are often forced to use seed from unregionalized varieties. This causes reductions in yields.

The USSR Ministry of Agriculture has still not taken the appropriate measures to improve breeding animal husbandry. Even those breeding farms directly subordinate to its main administration have, in recent times, had considerable deterioration in their work, have low productivity and sales of breeding animals have declined. Their quality is often lower than at ordinary farms. The better breeding farms had, at one time, been transferred to this ministry. It was recommended to the USSR Ministry of Agriculture that it bring the necessary order into the situation.

In studying the practical work of the Goskomsel'khoztekhnika under the new conditions, the commission came to the conclusion that this organization still has a poor knowledge of farms' demand for machinery and is not sufficiently meeting it. Overhead is still unjustifiably high at repair operations. The commission recommended that USSR Goskomsel'khoztekhnika increase the demands made upon the managers of its units and orient enterprises and organizations in the system towards closer ties with their partners. In the interests of improving agricultural production efficiency, there should be an acceleration of the restructuring of engineering services in the countryside in accordance with the decisions of the May (1982) CPSU Central Committee Plenum.

The appropriate recommendations have also been made to the USSR Ministry of Land Reclamation and Water Resources and to a number of construction ministries involved in agricultural projects.

The task now is for each sector in the agro-industrial complex to find the maximum resources and potentials for attaining the final result -- the fulfillment of the nation's Food Program.

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## AGRO-ECONOMICS AND ORGANIZATION

### SOVIET-HUNGARIAN AGROINDUSTRIAL COLLABORATION DISCUSSED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 12, Dec 83 pp 87-88

Article by G. Shmelev, doctor of economic sciences (USSR) and A. Balog (Hungarian People's Republic): "Collaboration in the Development of the Agro-industrial Complex"]

Text A Soviet-Hungarian scientific conference organized by the Institute of World Economics of the Hungarian Academy of Sciences and the Institute of Economics of the World Socialist System of the USSR Academy of Sciences was held in Budapest in March 1983. The possibilities and prospects for collaboration among CEMA member countries in the field of development of the agro-industrial complex were discussed. Special attention was paid to problems of Soviet-Hungarian collaboration. As is well known, the 26th CPSU Congress noted the skillfully organized work of Hungary's agricultural cooperatives and enterprises and the advisability of a careful study and widespread utilization of the experience of fraternal countries. In connection with this even closer collaboration is visible in the bilateral agroindustrial relations between the USSR and the Hungarian People's Republic, which is of great interest for the USSR and Hungary, because it is based on the observance of mutual interests.

The broad scientific exchange of views can be grouped into five generalizing subjects:

- 1) tendencies in the development of the Hungarian economy, including agriculture;
- 2) problems of and prospects for the development of the USSR agroindustrial complex in the light of the fulfillment of the country's Food Program;
- 3) problems of collaboration among CEMA member countries in the agroindustrial sphere;
- 4) bilateral collaboration between the USSR and Hungary in food production;
- 5) tendencies in the development of world agricultural production and of the main regions of the world market and the interconnection of these tendencies with the development of the food base of CEMA member countries.

Academician Y. Bognar, director of the Institute of World Economics of the Hungarian Academy of Sciences, discussed the state of Hungary's economy and its foreign economic relations. He drew attention to the need to continue the economic reform begun in 1968 and informed the participants in the conference of the economic processes that took place in the country in 1979-1982. These processes were positive from the point of view of the achievement and maintenance of the foreign economic balance. Y. Bognar singled out the following aspects in substantiation of the further development of the economic reform: improvement in the organizational structure of the Hungarian economy, including state control of the economy and management of enterprises; development of planned regulation (prices and other financial levers of stimulation of national economic sectors); movement of financial instruments among enterprises; combination of various social and economic types of enterprises, including big and small, which are most appropriate to the nature of occurring economic processes.

Ya. Marton, chief director of the Institute of Economics of Agriculture (Budapest), analyzed in detail the constantly changing forms of interrelations between big agricultural enterprises and small producers. These changes occur in connection with the transformation of the production structure of big farms, movement of the output of the private subsidiary sector, the population's needs for food products and the economic regulating activity of the state.

In Hungary integration interrelations between big agricultural enterprises and private subsidiary farms are based on the combination of economic interests fixed in a contractual form. A big socialist enterprise is almost always the initiator of such collaboration.

V. A. Tikhonov, academician of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, discussed the problems of the USSR agroindustrial complex in connection with the fulfillment of the Food Program. Its successful realization presupposes an accelerated development of animal husbandry, a sharp reduction of losses during harvesting and transportation, processing and storage of products, improvement in the structure of commodity food stocks, creation of a balance between the effective demand for food and its commodity stocks and so forth. To implement this, it is necessary to develop a more efficient and balanced structure of a systematic development of the entire agroindustrial complex of the national economy. At the same time, the natural-climatic conditions of individual regions and the most rational production and economic interaction between them must be taken into consideration.

The improvement in the economic mechanism, including systematic management of the agroindustrial complex of the national economy, also promotes social development. The following are important elements: improvement in the structure of the price system; application of a differentiated tax and credit policy; consistent operation of the principle of material interest. After the May (1982) Plenum of the CPSU Central Committee a number of measures of such a nature have been implemented in the Soviet Union.

Academician O. T. Bogomolov, director of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences, concentrated his attention on problems of coordination of the national agrarian policies of CEMA

member countries. In particular, he stressed that food plays a strategic role in the competition between the two socioeconomic systems, because capitalist countries attempt to use the "food weapon" as a means of political pressure. Meanwhile, food production in CEMA member countries does not yet occupy the proper place in the system of international socialist division of labor. The possibilities for collaboration in the development of the agroindustrial complex of these countries is not yet utilized fully. The intensification and expansion of collaboration among CEMA member countries in this sphere is a highly complex task.

In connection with this it is necessary to develop a concept of international socialist division of labor corresponding to modern conditions and requirements and economic stimulation should contribute to an acceleration of integration-type collaboration among the sectors and enterprises of the agroindustrial complexes of CEMA member countries.

Academician A. Shiposh, director of the Institute of Economics of the Hungarian Academy of Sciences, noted that agricultural production in European socialist countries increased at relatively high rates after 1960. However, in the majority of these countries it does not yet fully meet the population's constantly growing needs. In connection with this assistance for an efficient increase in output in these countries is the main object of collaboration among CEMA member countries in the development of the agroindustrial complex. For the most successful implementation of this it is also necessary to improve the mechanism of collaboration, including planning, price and financial regulation and stimulation and development of direct relations among enterprises.

K. Pechi, head of a division of the International Institute of Economic Problems of the International Socialist System (MIEPMSS), analyzed the possibilities for an increase in food production on the basis of the present economic conditions of collaboration among CEMA member countries. He also talked about the need to develop specific plans for the further development of collaboration and about their discussion at international meetings of scientists with the participation of representatives of practical organizations of the interested countries.

Doctor of Economic Sciences I. N. Buzdalov (Institute of Economics of the World Socialist System of the USSR Academy of Sciences) described the improvement in the economic mechanisms of CEMA member countries as an important prerequisite for the intensification of collaboration in the development of the agroindustrial complex of these countries. He also noted that the implementation of a long-term goal-oriented collaboration program in the field of agriculture and the food industry depends on the efficiency of the economic levers of collaboration.

G. I. Shmelev and B. Ye. Frumkin (Institute of Economics of the World Socialist System of the USSR Academy of Sciences) examined a broad range of problems connected with the elaboration of the concept of long-term collaboration among CEMA member countries in the development of the agroindustrial complex.

M. Rats (Institute of World Economics of the Hungarian Academy of Sciences) made a survey of the experience accumulated in the area of coordinated mechanization in agriculture, using the Agromash international organization as an example. This organization could also contribute to the development of the activity of CEMA member countries at the markets of countries outside the socialist camp.

K. Niri (Institute of World Economics of the Hungarian Academy of Sciences) analyzed the characteristics of international socialist division of labor in the field of agriculture and also described the significance of the market of the Soviet Union for CEMA member countries.

A. Darabant, commercial director of the Babolna agricultural combine, discussed the development of such sectors as poultry breeding, hog raising, vegetable growing and feed production within the combine. Through its Agrariya foreign trade office this combine directly reaches the international market.

B. Balkan (Institute of World Economics of the Hungarian Academy of Sciences) discussed Soviet-Hungarian collaboration in the production of plant protection agents.

Doctor of Economic Sciences V. V. Shepa and Candidate of Economic Sciences A. K. Almashi (Trans-Carpathian State Experimental Agricultural Station) reported on the development of and prospects for Soviet-Hungarian border relations in the agroindustrial sphere. Scientific-technical and economic collaboration among border regions represents one of the distinctive forms of economic integration of socialist countries. Despite the fact that such relations have not yet been developed extensively, they can become important elements of integration.

Academician M. Shimai, deputy director of the Institute of World Economics of the Hungarian Academy of Sciences, described the main tendencies in the food program of the world. A. Inotai, associate at the same institute, analyzed the trade in agricultural products between CEMA member countries and countries forming part of the EEC. Yu. Kish, associate at the same institute, reported on the food provision of developing countries and on their foreign economic relations.

In accordance with the proposals by the participants in the conference a Soviet-Hungarian working group of scientists was organized. It prepared the list of plans and developed proposals on collaboration in the development of the agro-industrial complex.

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## AGRO-ECONOMICS AND ORGANIZATION

### APPLICATION OF AUTOMATED CONTROL SYSTEM IN AGRICULTURE REVIEWED

#### Officials Respond To Criticism

Moscow SEL'SKAYA ZHIZN' in Russian 29 Oct 83 p 2

Article by N. Stolbushkin, USSR deputy minister of agriculture; M. Timoshishin, USSR deputy minister of procurements and I. Uskov, director of the Agrophysical Scientific-Research Institute: "Mistakes Associated With An Automatic Control System." See also article from 6 Sep 1983 issue of SEL'SKAYA ZHIZN', published in USSR Report: Agriculture, JPRS 84692, No 1408, 7 Nov 83 p 57/

Text The automatic control system for use in agriculture is still far from perfect. This was borne out in the article entitled "Mistakes Associated With An ASU automatic control system/" (SEL'SKAYA ZHIZN', No 205). In this article we are publishing the responses received from organizations engaged in introducing the latest control methods into agriculture.

USSR Ministry of Agriculture. In accordance with the results of a check carried out by the USSR KNK People's Control Committee, the problem with regard to the most efficient use of resources expended for developing an ASU for agriculture was examined. The use of unapproved accounting forms has been discontinued; the services of computer centers of the USSR Minsel'khoz Ministry of Agriculture system which performed this work earlier have been eliminated.

An important operational trend during the current five-year plan is that of planning and preparing a system of complexes of ARM's avtomatizirovannoye rabochoye mesto; automated working position/ based upon the use of micro and miniature electronic computers. The conversion over to their use will make it possible not only to expand the use of mathematical methods and computer equipment within the branch, but in addition it will also serve to change substantially the structure of the ASU in agriculture and to ensure the reliable processing of information, commencing with a farm and ending with the ministry.

In order to raise the level of coordination and the quality of work being carried out at the USSR State Committee for Science and Engineering, a coordination council has been created for the problem of automating control in the principal ministries and departments of the agroindustrial complex.

The overall requirements for an ASU for the APK /agroindustrial complex/ were developed and coordinated with the principal ministries and departments of the APK by the scientists and they were approved by the coordination council. The USSR Minsel'khoz /Ministry of Agriculture/, jointly with the USSR GKNT /State Committee for Science and Engineering/ is preparing recommendations for creating a system of information-computer services for the branches and enterprises of the agroindustrial complex.

N. Stolbushkin,  
USSR Deputy Minister of Agriculture

USSR Ministry of Procurements. The critical comments made in the article are deserving of attention.

The searching for more efficient and effective means for utilizing automatic control systems and also computer equipment, under the conditions imposed by the agroindustrial complex, constitutes one very important direction to be pursued for raising their effectiveness. At the present time, the coordination of these matters is being carried out by an inter-branch scientific-methodological council of the ASU for the APK, created on the basis of a decision handed down by the USSR State Committee for Science and Engineering, the work of which involves participation by our ministry. The technical task for the ASU of the APK has already been developed and recommendations have been introduced for developing the technical base for the branch automatic systems in keeping with the operating conditions of the ASU for the APK.

At the same time, USSR Minzag /Ministry of Procurements/ assumes that the creation of an ASU for the APK must be based upon branch automatic control systems, with use being made of the existing technical base for the respective branches in a particular region and be of an information-research nature.

The question with regard to raising the efficiency of use of computer equipment within the ministry's system has been examined by its board. Approval has been given for measures aimed at eliminating the existing shortcomings.

M. Timoshishin  
USSR Deputy Minister of Procurements

Agrophysical Scientific-Research Institute. In the article, our institute was cited as being one of the developers of programs for the ASU for agriculture, not yet being employed in the computer centers of the RSFSR MSKh. Herewith is a report on the present status of affairs.

During the 1969-1973 period, on the basis of an agreement with the RSFSR MSKh, a complex of programs was prepared for the purpose of analyzing the production-financial activities of agricultural enterprises. The programs were prepared to conform with the BESM-4 EVM /electronic computer/ and thereafter with the Minsk-32 EVM, since up until this point the majority of the computer systems in the RSFSR MSKh system had been equipped with Minsk-32 machines.

During this same period, the institute developed the Safist complex of programs for the statistical processing of large volumes of information. It

was included in the structure for standard mathematical support for oblast agricultural information-computer centers in the RSFSR. In 1981-1983, this complex was modernized for the new generation of SM-4 type EVM's, which the centers were being reequipped with.

It is our opinion that the questions raised in the newspaper are quite urgent. Thus we once again analyzed the trends and results of our work concerned with utilizing ASU equipment for the intensification of agricultural production.

#### Implementation Difficulties, Future Prospects

Moscow SEL'SKAYA ZHIZN' in Russian 16 Dec 83 p 2

Article by F. Gorodissliy, professor and doctor of economic sciences: "Plan For an ASU"

Text The introduction of ASU's automatic control systems into the work of agricultural enterprises is not an easy task. We are of the opinion that difficulties arise owing to the absence of an efficient program of action in connection with the creation of an ASU for agriculture.

Unfortunately, the need for such work still has to be proven. Why is it that the warning still prevails that ASU's are a development for the distant future? No doubt this belief has been fostered to a considerable degree by the fact that existing elements for the automatic accounting of information do not always furnish noticeable results. But when only a portion of a system is operating, it is difficult to achieve the desired effect.

What can we expect from this new approach for controlling agriculture, which inevitably is being provided through the use of ASU's? The mechanization and automation of the processing of information must improve considerably the control over economic and technological processes and facilitate, regulate and make more effective the work of specialists and leaders. In connection with the use of an automatic control system, a farm leader will not longer have to make daily trips out onto the fields or to the farms in order to obtain information, nor will he have to employ specialists for this purpose. In order to learn of the results for the previous day, he merely has to submit a request for them in the morning at the computer center, where he can acquaint himself with the production situation on a television display screen. Moreover, information will be made available to him not only concerning the status of affairs in the subunits for the previous day but also for a 10-day period and even a month's time. This will make it possible to reduce the amount of time required for selective planning and it will also lower administrative mistakes to a minimum.

What must be done in order to accelerate the development and introduction of such a system? The final result of this work and its effectiveness will depend upon the use of a scientifically sound solution as to what must be done and by whom. It is already possible to accomplish this today as a result of the presence of oblast and rayon agroindustrial associations, which in the various areas will coordinate the work of creating ASU's directly at sovkhozes and kolkhozes.

How is this being done in actual practice? The introduction of standard planning. The ministries and departments of the APK /agroindustrial complex/ must serve as the co-developers of the standard plans.

More than 260 million rubles worth of capital investments have been expended for the creation of computer centers. This has been of great assistance in launching work concerned with the creation of agricultural systems. There are now collectives of specialists for the carrying out of this work.

Finally, one must take into account the experience that has been accumulated in the creation and operation of more than 5,000 ASU's in our country. And this experience reveals that the method is fully justified: the standard planning for such systems and the collective operation of VTs's /computer centers/ functioning in a region, with the subsequent organization of computer networks.

In 1982-1983 the plans called for the carrying out of scientific studies and the development and presentation for approval by USSR Minsel'khoz /Ministry of Agriculture/ of the leading materials for standard planning solutions for the creation of new and the development of existing automatic systems at the level of an enterprise, rayon, oblast or republic and taking into account their interaction with branches of the agroindustrial complex.

It would appear from the materials of an inspection carried out by the USSR People's Control Committee that as yet not one standard system has been created or introduced into industrial operation at the mentioned levels of control. Moreover, the appropriate organizations of USSR Minsel'khoz have not commenced the creation of standard plans for the four levels of control, in the interest of ensuring their circulation and introduction into operations on a mass scale.

And it is impossible to hope for success in the absence of this initial stage of work. Indeed the meaning and effectiveness of standard planning consists of devoting thought to a standard model and creating a standard plan for an ASU for an agricultural enterprise and thereafter circulating and introducing it in all areas and repeatedly, while coordinating it with the objects of control and taking into account the existing peculiarities.

In view of the fact that today we do not have ASU's for agricultural enterprises, the work concerned with creating them should ideally be organized in two phases. Here we have in mind the need for initially defining the limited range of tasks and thereafter improving both their quantitative structure and their quality. In the process, importance is attached to ensuring that the automation encompasses simultaneously the economic and technological processes of agricultural production through the creation of comprehensive ASU's.

For example, this was precisely the conclusion drawn at the Sovkhoz imeni Lenin in Moscow Oblast. For the second year now, automatic accounting has been employed here for information concerned with the computation of wages, benefits, various additional payments and a number of other operations. A basic sub-system entitled "Accounting" has already been introduced. It has

made it possible to employ various administrative decisions in a more efficient manner. The economists and sovkhoz leaders, based upon actual practice, are convinced that the use of EVM's must be expanded. Indeed, when introduced into automatic systems, they are capable of performing the following tasks in a high quality manner: developing the economic indicators, uncovering production reserves and exercising control over a production technology and even over losses in working time.

Thus, standard planning is necessary. How should it be organized? Tests have shown that with the creation of automatic systems for the APK, use can be made of only four types of standard plans for ASU's for agriculture instead of many individual ones.

The first of them -- a standard plan for an automatic control system for an agricultural enterprise -- sovkhoz or kolkhoz. It can take several forms depending upon the production specialization.

The second standard plan -- a plan for a control system for a rayon agro-industrial association. It must appear as a complex consisting of an automatic system for satisfying the information requirements of the working staff of a RAPO /rayon agroindustrial association/ and a number of systems of agricultural enterprises included in the structure of the given RAPO.

The third plan is similar to the second one -- an automatic system for controlling an oblast agroindustrial association.

The fourth plan is intended for the republic level of control.

As a result of standard planning, success was achieved in avoiding the considerable losses associated with individual planning. These losses are expressed in the need for large and costly changes aimed at ensuring that these ASU's, created as the saying goes on an "individual" basis, are included in the common state and branch systems and in OGAS /obshchegosudarstvennaya avtomatizirovannaya sistema; all-state automatic system/.

What can be obtained as a result of use of the standard plans for an ASU for agriculture? In the final analysis, a small OGAS for an agroindustrial complex will be built.

The time is at hand for including in this work a group of developers who, under the aegis of the RAPO, could interact closely with the existing computer centers of organizations and enterprises belonging to the APK system. Thus the reorganization of these systems into group use centers will commence as the foundation for computer networks which will ensure implementation of the USSR Food Program. It is our opinion that the allocation of capital investments, electronic-computing equipment and communication equipment for ministries and departments of the APK should be carried out on a special purpose basis. A requirement also exists for solving the problem of training appropriate personnel for the future -- planners and operators for the automatic systems.

7026  
CSO: 1844/181

## AGRO-ECONOMICS AND ORGANIZATION

### PROGRESS OF UKRAINIAN SUBSIDIARY FARMS REVIEWED

Kiev PRAVDA UKRAINY in Russian 12 Nov 83 p 2

[Article by N. Talalay: "Agrarian Shops of an Enterprise"]

[Text] In December 1978 the CPSU Central Committee and the USSR Council of Ministers passed a resolution, "On Subsidiary Agricultural Enterprises, Institutions and Organizations." It foresaw a complex of measures related to the creation of new and continued development of existing agrarian shops. The second resolution (February 1980) clarified the rights and increased the authority of enterprises and local organs of power, enabling workers to manage subsidiary enterprises at a profit and highly efficiently. The Food Program mentions the production of food products in agrarian shops as one of our basic directions.

Five years have passed. What has been done? How are enterprises developing and what is their contribution to the food stores of the republic?

Getting ahead of ourselves we can say that the contribution has been quite a weighty one. In the past year the republic's subsidiary enterprises produced 67,500 tons of meat, 26,200 tons of milk, 25 million eggs and tens of thousands of tons of vegetables, potatoes, fruits and berries. This was significantly more than in 1981. Many enterprises work highly efficiently and supply workers with supplementary nourishment without interruption. Among the best are the agrarian shops of the Sverdlovantratsit Production Association, the Dnepr Metallurgical Plant imeni Dzerzhinskiy, the Kaluga Khlorvinil Production Association and a number of others.

And still the quantity of subsidiary enterprises has not reached the desired number; their possibilities for production output have not been exhausted by far.

Whereas the UkrSSR Ministry of the Coal Industry, for example, has 142 subsidiary farms, the Ministry of Ferrous Metallurgy has only 40. The

subsidiary farms of the former last year supplied each worker with 12.8 kilograms of meat; of the latter--three times less. Building ministries have very few subsidiary farms-- the Ministry of Construction Materials Industry has 54, the Ministry of Installation and Special Construction Work has only 4, the Ministry of Construction of Heavy Industry Establishments has three and the Ministry of Rural Construction--two. The Ministry of the Communal Housing Industry does not have a single subsidiary farm.

Why have some enterprises been able to create their own agrarian shops and to produce food on them, while others have not even thought about them? Much depends on the director and on the party and trade union committee.

"For the organization of an agrarian shop," says the general director of the Kaluga Khlorvinil Production Association, A. B. Kondratenko, "the desire to do so is the minimum requirement."

This is not simply a line. In the early 1970's A. B. Kondratenko had the idea of creating an agrarian shop. The director's idea was supported by the party committee and public organizations. A worthless piece of land was used to build a hog fattening facility for 100 head using the enterprise's resources and food wastes were utilized as feed. Increased meat rations were first issued to the workers of labor-intensive professions--to miners and metallurgists.

Having become convinced that their own subsidiary farm was worthwhile, the directors of the Khlorvinil decided to develop it. Today the agrarian shop fattens about 1,500 hogs. Last year public nutrition in the enterprise received 1,137 quintals of meat, and this year it will receive even more.

Where does the feed come from? As before, a significant proportion of the ration comes from food wastes--over 500 tons are collected. Feed crops were sown on 33 hectares of land unsuitable for agricultural purposes and on 17 hectares of land earmarked for industrial building. A considerable amount of green mass is cut in forests and forest belts. A certain percentage of mixed fodder is provided by the state. In other words, there is a sufficient amount of feed, the meat branch is profitable and yields up to 5,000 rubles of clear profit annually. The subsidiary farm also has 3,000 square meters of hothouses and 3 hectares of orchards, which last year yielded 13,000 rubles of clear profits.

The agrarian shop of Khlorvinil continues to develop.

"In 1984 we will already have fish here. We are beginning bee-keeping with 150 bee families. Mycelium has been planted in an old mine and we will raise mushrooms," say A. B. Kondratenko and P. M. Kozar, the director of the ORS [Department of workers' supply] in sharing their plans.

However, let us become acquainted with another subsidiary farm. It belongs to Kolomyyskiy Wood Processing Plant. There are seven times fewer workers here than at the Khlorvinil. The USSR State Committee for Vocational and Technical Education, to which the plant is subordinate, does not allocate resources for

subsidiary farms. Plowland was also not allocated to the plant. Nevertheless an agrarian shop was organized here. In 1980 it provided cafeterias with 25 quintals of meat, in 1981--242, and in 1982--419 quintals. This year there will be even more. This is not all. The workers of harmful professions receive fresh milk from their private plots-- 250 quintals in 1981, 487 in 1982 and this year almost 1,000. They have their own early hothouse cucumbers, their own honey and eggs from their poultry farm.

Where did all of this come from? In the neighboring kolkhoz workers bought old and unused facilities and renovated them into pig and cow sheds. They drained 103 hectares of flooded land and planted crops and bought livestock. All of this was done using the funds of the enterprise, or more precisely-- using above-plan profits. The subsidiary enterprise has not yet begun producing profits, but losses as compared to last year decreased by half.

It appeared that the Cherkasskiy Plant for Chemical Reactants had no prospects whatsoever for creating a subsidiary farm. It wasn't that they couldn't find any plowland or useless land. Director Valentin Vasil'yevich Bykhov fell into the category of managers who seek out possibilities to do a job and not excuses for avoiding it.

An excellent pigsty was built directly in the plant behind the production buildings using above-plan profits. The distribution of feed and water is mechanized; manure is washed away with hot water into a concrete well and from there it is pumped into the plant's sewers and to cleaning facilities. The feed shop is equipped with reactors written off from principal production. Floors are heated so that in the wintertime piglets do not get chilled and lose weight. At the present time 250 hogs are being fattened here and 20 sows are involved in reproduction. The basic feed once again is food wastes.

Forty three subsidiary farms of the Cherkassy Oblast consumers' union last year produced 455 tons of pork. Together they have a total of only 11 hectares of land. In essence this included parcels of land belonging to the enterprises sown in feed crops. In Zaporozhye Oblast 130 agrarian shops occupy a total of 0.2 percent of lands and produce 1.5 percent of total meat production or 2,600 tons, and another 850 tons of milk, 1,500 tons of vegetables and fruits and 7 million eggs.

This means that even in the absence of plowland it is possible to create a subsidiary farm if the desire to do so is there.

Every enterprise must have its own subsidiary farm--this is a requirement of the times. Still we must consider that it is not easy for a small plant to deal with this problem. Then why not cooperate in resources and efforts among several small or even average-sized enterprises, why not create common agrarian shops? This was precisely the path followed in Berdyansk of Zaporozhye Oblast.

A directors' council joined the resources of 20 enterprises, organizations and institutions and in a short time the uncared-for, small and unprofitable subsidiary farm belonging to the restaurant and cafeteria trust was replaced by

four fattening facilities (three for winter and one for summer), a feed shop and a storehouse for feed. This is the first stage of the complex. In 1982 over 3,000 quintals of meat were already produced here. Until the end of the five-year plan, when the second and third stages of the complex will be put into operation, the complex will fatten 10,000 hogs annually and obtain 8,500 quintals of gross weight gain. I feel that there is no need to comment on the advantages of the collective creation of a large subsidiary farm because they are self-evident.

In pork production Berdyansk workers are placing an emphasis on the maximal utilization of food wastes.

The gorkom and ispolkom of the city soviet are doing extensive work among the population to explain the importance of saving food wastes. In residential areas special points have been built, the required amount of packaging has been determined and the shipment of food wastes to the complex has been organized.

The maximal utilization of food wastes is very important. It has been reliably calculated that there are at least 60 kilograms of food wastes annually per city dweller. How much do we collect? We are ashamed to admit that on the average in the republic we collect only a fourth of what we could collect. It is true that in Kiev we collect 27 kilograms per citizen, but still this is less than half. In Khar'kov, Donetsk and Dnepropetrovsk 20 kilograms per person are collected; in Zaporozhye and Voroshilovgrad--17. A very insignificant quantity of food wastes is utilized in the cities of the Transcarpathian and Kiev oblasts. If only local organs of power and directors of enterprises would deal in a business-like manner with the organization of collections of food wastes, how much inexpensive feed we could have to fatten hogs! Right now most food wastes go to the dump.

Up until now the discussion has centered on subsidiary enterprises which are not allocated plowland. What kind of success has been achieved by those which have received it?

The Andreyevka Subsidiary Enterprise of the Motorostroitel' [Motor construction] Production Association in Zaporozhye was created in a small kolkhoz in the village of Vol'noandreyevka in 1932. The enterprise has 587 hectares of agricultural lands, including 403 hectares of irrigated plowland and 136 hectares of irrigated orchards. The association's management is not chary in supplying resources for the development of the agrarian shop. During the last 5 years alone about 5 million rubles were invested in capital building.

But let us see whether the effectiveness of the enterprise is high. All of the plowland is occupied by feed crops whereas in kolkhozes and sovkhozes feed crops are sown on 20 or at most 25 percent of the plowland. The subsidiary farm has the opportunity to supply the herd with a sufficient quantity of full-value feed and to produce inexpensive meat and milk. However, the cost of a quintal of beef exceeds planned costs by 148 rubles; of pork--by 55 rubles; and of poultry meat--by 9 rubles. The poultry farm is supported by state feed. Even with the great help given to the subsidiary farm by the association with regard to material resources and workers, its general

profit level does not exceed 2 percent. Can this be said to be effectiveness?

Let us summarize briefly. In the republic a great deal of experience has been amassed concerning the creation and development of subsidiary farms in enterprises, organizations and institutions. They make a noticeable contribution toward fulfilling the Food Program. Nevertheless, the directors of a number of ministries, departments, local party and soviet organs, enterprises and institutions have not yet realized the full measure of importance of this problem.

Educated specialists with initiative are needed to work on subsidiary farms. It is evident that it would be expedient to oblige the rayon and oblast agro-industrial association to render ongoing aid to agrarian shops located in their territory. Of course, an uncompromising worker and people's control are needed to oversee the operations of subsidiary farms.

Almost 5 years have passed since the party and government's resolution concerning the subsidiary farm. Much has been done. But violations exist as well. We must make amends.

8228  
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## AGRO-ECONOMICS AND ORGANIZATION

### EVALUATING QUALITY OF AGRICULTURAL PRODUCTION

Moscow EKONOMICHESKAYA GAZETA in Russian No 3, Jan 84 p 18

Article by A. Glichev, director of the All-Union Scientific Research Institute for Standardization; Ya. Beda, scientific worker; I. Mashkevich, chief of administration for USSR Gosstandart: "Quality of Output -- Evaluation of Work"

Text Commencing this year, a number of kolkhozes and sovkhozes will carry out a production check on the methodological instructions entitled "Evaluating the Quality Level for Agricultural Products." They have been confirmed by the USSR State Committee for Standards and approved by the USSR Minsel'khoz Ministry of Agriculture and by USSR Minplodoovoshchkhоз Ministry of the Fruit and Vegetable Industry. The essence of this method and its purpose are discussed in a consultation by the All-Union Scientific Research Institute of Standardization and Agricultural Administration of Gosstandart State Committee for Standards of the USSR Council of Ministers.

The quality of the agricultural products produced by a labor collective is determined by the quality of the work performed by that collective. At the present time, with all of the conditions required for raising considerably the efficiency of agricultural production having been created, it is not enough to merely supply the contractual collectives with the tasks for producing products in kind or for the wage fund. The tasks must also take into account the quality level of the products. If the work of a labor collective is being paid for at the present time based upon the final results, that is, the products obtained, then it is our opinion that the principal criterion for the formation and distribution of the material incentive fund must be the actual indicator for the level of quality of the products. Thus the methodological instructions call for the establishment of a direct relationship between the compensation for labor and its final results -- the quantity and quality of products.

A further increase in the role played by the labor collectives in solving the economic, social and educational tasks imposes new requirements with regard to the organization of a socialist competition. At the present time, when evaluating the results of such a competition, attention is focused first of all upon the quality indicators. In our opinion, the chief such indicator for a

labor collective and for each worker must be the indicator the quality level of a product. The introduction of this indicator raises individual and collective responsibility, it stimulates a creative search for reserves and an intensification of the regime aimed at realizing economies and it promotes the introduction of collective forms of work. In the process, one of the decisive criteria called for in the methodological instructions is that of absolute observance of the requirements called for in the existing standards.

This is why it is so important for the specialists, leaders and party workers, when developing the socialist competition, to display concern for ensuring that the essence and purpose of each standard and the methodological instructions are understood by all of the workers attached to a brigade, team or farm. Methodological assistance in these matters is furnished by the scientific workers attached to the All-Union Scientific Research Institute for Standardization. But the functions of the VNIIS /All-Union Scientific Research Institute for Standardization/ are not limited to this activity alone. In this regard, the RD50-413-83 document is being introduced into agricultural practice for the very first time and the institute is participating directly in work associated with introducing it into operations at kolkhozes and sovkhozes.

The initial data for computing an evaluation of the quality level for marketable products includes the physical weight of the products offered by a farm for sale and its credited weight (with a breakdown by marketable grades, classes and categories, if such a gradation is called for in the standard for the particular product) and also the cost of a unit of product weight in accordance with the existing purchase price handbook and the actual price established upon acceptance (taking into account the monetary incentive bonuses and allowances for quality).

The principal sources for the initial information employed for computing the quality level for products sold to the state are those documents and forms approved by the USSR TsSU /Central Statistical Administration/: acceptance receipts, accompanying invoices, wholesale lists and annual reports of a farm and also purchase price handbooks and standards for the agricultural products.

The initial information for evaluating the quality level for products, employed for intra-farm requirements, includes the indicator data for their quantities and quality as shown in the appropriate documents for crediting these figures at a farm, the appropriate standards (technical conditions) and purchase price handbooks for agricultural products and also the "Principal Methodological Statutes for Determining the Accounting Prices for Agricultural Products for Inter-Farm Cooperation," which were approved by USSR Mine sel'khoz and the State Price Committee of the USSR Council of Ministers.

The existing standards are presently divided into two groups depending upon the peculiarities of the established requirements with regard to the quality of the agricultural products.

In the case of the standards in the first group, the quality norms are differentiated according to the marketable grades, classes, categories and groups, whereas the quality norms in the standards of the second group are

expressed in a more simple manner, that is, with no breakdown as to marketable grades.

Thus the ukach 'uroven' kachestva; quality level for agricultural products should ideally be evaluated using the two methods.

Data on Grade Structure For Milk Sold By Two Farms

Number of Marketable Dairy Farm	Physical Weight of Milk Presented For Delivery, in tons	Total Amount of Milk Credited, in tons	Credited By Marketable Grades:					
			1st Grade		2d Grade		Sub-standard	
			Tons	Purchase Price For 1 Ton, in rubles	Tons	Purchase Price For 1 Ton, in rubles	Tons	Purchase Price For 1 Ton, in rubles
1	210	200	50	215	90	200	60	190
2	190	190	70	215	20	200	100	190

The formula for evaluating the quality level for agricultural products, which is subdivided into standards for marketable grades, is as follows:

$$\text{Ukach} = \frac{T_1 \times K_1 + T_2 \times K_2 + T_H \times K_H}{T_{fiz}}$$

where  $T_1$ ;  $T_2$  -- is the credited weight of the appropriate marketable grades (in tons);

$T_H$  -- is the credited weight of the substandard products (in tons);

$K_1$ ;  $K_2$  -- the coefficients of weightiness for the respective marketable grades;

$K_H$  -- the coefficient for substandard output;

$T_{fiz}$  -- the physical weight of the products presented for sale (in tons)

For products for which the basic norms were established on the basis of quality indicators describing the overall condition of the products (moisture content, weediness and so forth) and which were eliminated during the course of additional processing of the products, the credited weight of the products (standard and non-standard, in tons) is shown in this same formula in the denominator.

The coefficient for the highest (1st) grade ( $K_1$ ) is accepted as being 1.0. If the plans call for bonuses to be added to the prices or for price reductions, then this coefficient is computed as the ratio of the actual price established

to the purchase price found in the price list. The coefficients for lower grades ( $K_2$ ,  $K_H$ ) are computed as ratios of the purchase prices established for the particular grades to the purchase price for the highest (1st) grade, while taking into account the actual monetary bonuses (allowances) obtained.

For example, if the purchase price for 1 ton of 1st grade milk (taking into account an additional payment for coolness -- temperature no higher than  $-10^{\circ}\text{C}$ ) 2d grade and substandard milk amounts to 215, 200 and 190 rubles respectively, then the coefficient for the 2d grade will be 0.93 (200 : 215) and for the substandard grade 0.88 (190 : 215).

Let us assume that a need exists for evaluating the quality level for various marketable grades of milk sold during the year by two competing farms. The initial data is furnished in the Table.

Substituting this data in the formula, we obtain: a quality level of 0.89 for the first farm and for the second -- 0.93.

The methodological instructions also call for formulas for computing the quality levels for agricultural products which are not subdivided into marketable grades by standards.

It is our opinion that determining the quality levels for agricultural products will make it possible to evaluate more objectively the work of labor collectives, the degree to which they should be issued incentives and at the same time it will reveal the true winners of the socialist competition.

7026  
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## AGRO-ECONOMICS AND ORGANIZATION

### REORGANIZATION OF AGRICULTURAL ADMINISTRATION IN GEORGIA DISCUSSED

Moscow SEL'SKAYA ZHIZN' in Russian 28 Dec 83 p 2

[Article by R. Kakuliya, deputy chairman, Georgian SSR State Committee on Agricultural Production, candidate of economics: "Economic Levers in Action"]

[Text] A recent CPSU Central Committee decree favorably evaluates the activities of the Central Committee of the Georgian CP in the development and introduction of efficient methods for managing the agro-industrial complex on the rayon and republic levels. The unified Georgian SSR State Committee on Agricultural Production has been formed on the basis of three ministries. This article describes its first steps in the improvement of economic relations in the agro-industrial complex [APK].

The most important task of the Georgian SSR State Committee on Agricultural Production is to combine the interests of the partners in the APK with regard to attaining good final results and implementing the Food Program. Special attention is being given to developing the appropriate economic mechanisms for the APKs functioning in individual rayons and in the republic as a whole.

Above all, this involves the development of the kholzraschet [cost accounting] system of relations between members of agro-industrial associations. It is based upon contractual forms of cooperation and accounts for services. It also absolutely requires that all participants in such relations have an interest in the final results of production. Thus, at the Abashskiy RAPO [Rayon Agro-industrial Association] practically all farms have been switched over to complete production and technical servicing by Sel'kholztekhnika rayon associations, with whom they have signed contracts for mechanized work. Accounts are settled on the basis of standard hectare rates agreed upon with RAPO management.

Here is the procedure followed. Farms initially pay only 90 percent of the cost of the work performed. At the end of the year they pay the remaining 10 percent if the planned yields are obtained from the fields serviced. If the yields exceed the plan, an additional 10 percent is paid. If a farm overfulfills its profit plan, the Sel'kholztekhnika rayon association receives 0.2 percent of each 1 percent overfulfillment if production profitability is at the 20 percent level. If profitability levels are higher, the payment for services is

increased another 0.5 percent. There are similar forms of relations with regional administrations for land reclamation and water resources.

The introduction of kholzraschet relations has made it possible to increase crop yields, improve the indicators for tractor and machinery utilization, reduce needs for spare parts and operationally shift equipment around within the rayon.

The centralization of planning and material-technical supply functions within RAPO is another economic lever of administration. The associations have started acting like a unified organ of planning and distributing material and financial resources. They regulate the use of capital investments and Gosbank credits allocated to kolkhozes and sovkhozes. RAPOs also use forms of economic cooperation between farms such as mutual financial and material assistance and the shifting of labor, equipment and other means of production.

Acting as a unified production-management complex, RAPOs assist in the development of direct ties between farms and industrial enterprises, procurement and trade organizations and scientific institutions. For example, animal products from a whole series of rayons are received directly by enterprises in the meat and dairy industry. Since the creation, in 1975, of a republic agro-industrial and trade association for the production, processing and sales of fruit and vegetable products, there have been direct ties between production and trade. This has helped considerably reduce losses of perishable products and has brought their wholesale and retail prices closer together.

Rayon subdivisions of the Gruzsel'khozzagotovka [Georgian Agricultural Procurement] Association are also subdivisions of RAPOs, with the rights of a corporate body. They procure agricultural products both from public farms and from the population. They retain only three percent of the profits obtained from product sales, the rest they redistribute between kolkhozes, sovkhozes and other agricultural enterprises proportionally to their shared participation. During 1980-1982 the republic's kolkhozes and sovkhozes obtained additional incomes totalling 22.8 million rubles from these sources.

Close cooperation between individual farms, RAPOs and scientific institutions is also having tangible advantages. For example, the temporary partnership between the Makharadzevskoye RAPO and the Anaseul'skiy Scientific Research Institute and Production Association for the Tea Industry resulted in the creation of a facility for using tea industry wastes to produce a natural tea concentrate and a tonic drink. In the first year of its operation this facility obtained profits of more than one million rubles. Twenty percent of this was allocated to the institute's economic incentives fund. Similar contracts are being signed between various production units and other scientific research centers in the republic.

The republic's State Committee on Agricultural Production places great importance upon the dissemination of progressive forms of material stimulation. Let us return again to Abashskiy Rayon. Much has been done here to establish a close dependence of labor payments on final production results. Here is one of the examples of material incentives to kolkhoz farmers and sovkhoz workers for increasing production. If the plan is fulfilled or overfulfilled, corn growers receive 10 percent of the gross harvest and 70 percent of the above plan output

in kind. Vegetable growers receive 20 percent of the value of the gross harvest and 50 percent of the value of above plan output (at purchase prices). With minor changes this system has been applied to other types of production.

The system of providing incentives to animal husbandry workers is of definite interest. Payments to milkers are closely linked to how well they meet the monthly target. In addition to basic wages they are given definite amounts of corn (part at state purchase prices and part free), 15 percent of the milk obtained above the plan and definite quantities of meat from each calf born to their group of cows.

Material incentives to mechanics, machine operators and land improvement workers also depend upon the final product obtained at the farms they service.

The rayon also has experience in collective contract work. Each brigade has 10 machine operators. The collective operates on khozraschet, and work is paid by the job contract plus bonus system with advances. Additional pay depends directly upon the degree of plan fulfillment.

RAPO centralized funds are very important. These include: the production development, social-cultural measures and housing construction, material incentives and reserve funds. In Georgia last year 29.9 million rubles were transferred to central funds of rayon agro-industrial associations. When added to carry-overs at the beginning of the year the figure reached 33.6 million rubles. Of these, 14.2 million were used to strengthen the economies of agricultural enterprises, and 4.7 million to assist service and processing enterprises.

The Makharazdevskoye RAPO is a vivid example of the creation and purposeful use of centralized funds. Its annual funds amount to 4.3 - 7 million rubles. The centralized fund for expanding and strengthening farms in the rayon was used to build a facility for producing construction materials, a small factory for processing tea leaves and a facility for producing natural tea concentrate. Sizable sums have been allocated to improve the material-technical bases of low profitability farms. The Kobuletskoye RAPO was allocated 479,000 rubles for the construction of vegetable growing greenhouses and 200,000 rubles for an inter-farm animal husbandry operation. The Goriyskoye RAPO spent 276,000 rubles from the farm expansion and strengthening fund to rebuild animal husbandry operations at kolkhozes and sovkhozes. The councils of the Abashskoye, Lagodekhskoye, Gal'skoye, Zestafonskoye and Khashurskoye RAPOs are giving special attention to the development and implementation of measures to improve the economies of non-profitable and low profitability farms through the rational use of centralized funds and material-technical resources.

Experience in the improvement of the APK economic mechanism which has been gained by various rayons is being disseminated throughout the entire republic. However, there are still many problems requiring solutions here.

The Georgian SSR State Committee on Agricultural Production is developing a complex of measures for liquidating constraints, making it possible to better use other economic levers. In order to improve agriculture's material-technical supply, on 1 October 1983 the centralized delivery of supplies and mixed feeds

was introduced. Their payment is also centralized. This makes it possible to free farms from concerns about acquiring energy supplies and ensures their prompt delivery. It reduces unproductive expenditures involving the storage, transport and delivery of machinery and equipment and improves the responsibility of material-technical service workers for the prompt delivery of equipment. It has also been decided that henceforth the decisive factor in repair enterprise work is not the fulfillment of sales plans, but indicators concerning the complete readiness of equipment for agricultural work.

The improvement of the APK's organizational structure is one of the decisive factors for improving economic indicators. This means coordinating rayon and republic elements of the APK with the Goskomsel'khozproizvodstvo GSSR [Georgian SSR State Committee on Agricultural Production]. In particular there are preparations for strengthening service enterprises and organizations within RAPOs.

It is intended to create structural units for transport, material-technical supply, mechanization and electrification, chemicalization, land reclamation and construction within RAPOs. The chief of the mechanization and electrification service will be the deputy chairman of the association and will manage both that service and the former rayselkhoztekhnika. Similar changes are also planned for the rayon associations of Sel'khozkhimiya and the rayon administrations for land reclamation and water management. Thus, with the help of mechanization and electrification services the RAPO should manage engineering policy, and, through the animal husbandry department manage the development of the animal husbandry sector in general.

We feel that the implementation of these and other measures will promote the closer coordination of all elements of the agro-industrial complex and the attainment of better final results.

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CSO: 1824/171

## AGRO-ECONOMICS AND ORGANIZATION

### APK PRESIDIUM CONFERENCES REVIEW PROBLEMS, TASKS

USSR Commission Offers Recommendations

Moscow SEL'SKAYA ZHIZN' in Russian 13 Dec 83 p 3

#### Article: "To Develop Intensive Production Methods"

Text On 12 December the Commission of the Presidium of the USSR Council of Ministers for problems concerned with the agroindustrial complex listened to reports delivered by representatives of the councils of agroindustrial associations in Osh Oblast in the Kirghiz SSR and Beloyarskiy Rayon in Sverdlovsk Oblast on work carried out by them in the use of cost accounting at kolkhozes and sovkhozes. Having taken note of the positive aspects in the work of the mentioned councils, the commission focused attention on areas of serious neglect in this work. At a number of farms in Osh Oblast and Beloyarskiy Rayon the cost accounting tasks are being carried out on a very tardy basis, the results of the economic activities of subunits are not being summarized in a timely manner, in many areas the bureaus for economic analysis are not in operation and the regime for achieving economies is not being observed. Some farms are tolerating incorrect use of their working capital and they are late in paying off their USSR Gosbank loans. The association councils are still not devoting proper attention to improving the economic activities of backward kolkhozes and sovkhozes and they are not providing them with the proper assistance in improving their economies.

The commission has required the councils of the mentioned associations to correct the existing shortcomings as rapidly as possible and to ensure the use in all areas of genuine and non-formal cost accounting procedures at all levels of agricultural production.

A report was delivered by the chairman of USSR Goskomsel'khoztekhnika L.I. Khitrun on the preparation of the machine-tractor pool of kolkhozes and sovkhozes for the 1984 spring field operations and specific measures were outlined for accelerating repair work on tractors, soil cultivation and sowing machines and on land reclamation equipment. The machine-building ministries were provided with instructions for ensuring unconditional fulfillment of the tasks for supplying agriculture with new equipment and also for timely deliveries of spare parts and repair materials. Special attention was given to the need for ensuring the thrifty use of fuel and lubricating materials in agriculture and for accumulating them in the quantities required for spring sowing.

The problem with regard to the storage of potatoes and fruit and vegetable products at bases in Kiev, Karaganda, Kursk, Orenburg and Saratov was examined. The existence of serious shortcomings in the organization of this work was pointed out. The leaders of associations and enterprises in the mentioned cities were warned that they would be held strictly accountable if measures were not undertaken to correct the situation with regard to the storage of potatoes and fruit and vegetable products.

The commission criticized the work of USSR Ptitseprom /Poultry Industry/ for failing to raise production efficiency at the poultry factories and poultry production farms. Economic work is not being carried out at the proper level at some enterprises within the system, poultry productivity remains low and considerable over-expenditures of feed are being tolerated and this is resulting in high production costs. The serious shortcomings noted in management of the branch were pointed out to the chief of USSR Ptitseprom I.A. Bakhtin and he was tasked with intensifying all work aimed at increasing the production of poultry products.

The commission also outlined measures for ensuring the timely placing in operation of enterprises for the production of whole milk substitutes within the USSR Minmyasomolprom /Ministry of the Meat and Dairy Industry/ system.

#### **Ukrainian Progress Report**

Kiev PRAVDA UKRAINY in Russian 30 Nov 83 p 2

#### /Article: "Meeting of the Commission"/

/Text/ A meeting was held by the Commission of the Presidium of the Council of Ministers of the Ukrainian SSR for problems concerned with the agroindustrial complex. During this meeting a discussion took place on the work of the Khristinovskiy RAPO /rayon agroindustrial association/ in Cherkassy Oblast with regard to increasing the production and procurements of farming and animal husbandry products. A report was delivered by the chairman of the association's council T.M. Boyko.

It was mentioned during the meeting that an increase had taken place in the production and procurements of the principal types of field and farm products as a result of work carried out by the agroindustrial association under the direction of the rayon's party organs. Approximately 36 quintals of grain crops, 374 quintals of sugar beets and 19 quintals of sunflowers were obtained from each hectare this year. More than 600 quintals of milk and approximately 160 quintals of meat will be produced per 100 hectares of agricultural land.

At the same time, it was pointed out during the meeting of the commission that the council of the agroindustrial association is not making full use of its potential for successfully implementing the Food Program. The growth in agricultural output at a number of kolkhozes and sovkhozes is lagging behind the requirements of the times. For example, considerable differences are being observed in the cropping power of field crops and in livestock productivity. Quite often the accepted crop rotation plans are not being followed, the return from fertilizers, herbicides and toxic chemicals is less than adequate and serious derelictions are being observed in seed production

and in the production and utilization of feed. The RAPO council is still only weakly coordinating the activities of enterprises and organizations included in its structure, it is not undertaking the measures required for raising the responsibility of partners in the agroindustrial association for the final results and it is not devoting proper attention to the problems concerned with improving skills and retaining personnel in the rural areas.

The commission has required the council of the rayon agroindustrial association to correct the shortcomings uncovered, to activate the work of accelerating the introduction into production operations of scientifically sound farming systems, implementing the republic's special purpose and comprehensive Agrokompleks and Sakhar scientific-technical programs and ensuring effective use of the collective contract method. The recommendation was made to have the council of the Cherkassy Oblast Agroindustrial Association improve its administration of the rayon associations.

The draft state plan for the economic and social development of the Ukrainian SSR during 1984, in accordance with the agroindustrial complex, was examined during the meeting of the commission.

Those who participated in the meeting listened to a speech delivered by the deputy chairman of the Commission of the Presidium of the Council of Ministers for the Ukrainian SSR for problems concerned with the agroindustrial complex, 1st deputy chairman of Gosplan for the Ukrainian SSR V.P. Popov.

Executives from the Council of Ministers for the Ukrainian SSR and a number of the republic's ministries and departments participated in the work of the meeting.

#### Shortcomings in Georgia Examined

Tbilisi ZARYA VOSTOKA in Russian 25 Nov 83 p 2

#### /Article: "An Efficient Rhythm for the Agroindustrial Complex"/

/Text/ The regular meeting of the Commission of the Presidium of the Council of Ministers of the Georgian SSR for problems concerned with the agroindustrial complex was held and conducted by the deputy chairman of the Council of Ministers of the Georgian SSR O. Vardzelashvili.

The carrying out of the capital construction plan for agricultural installations and the republic's processing industry during 10 months of this current year, the procurements of animal husbandry products and other problems were examined.

It was noted that the republic's rural builders have achieved definite successes. For example, the majority of the year's 21 important agricultural construction projects have been placed in operation and the plans for the use of capital investments were fulfilled in a satisfactory manner. However, the fact that the construction organizations of Minsel'sstroy /Ministry of Rural Construction/ are systematically failing to carry out the plan for

contractual work at installations of Goskomsel'khozproizvodstvo for the Georgian SSR is arousing some concern. An unfavorable situation has also developed at construction sites of Gruzsel'khozhimiya.

In examining the problem of livestock product procurements, attention was focused on the fact that the farms are delivering their animals on an irregular basis from the standpoint of time and this is disrupting the efficient utilization of the meat combines. A special schedule was prepared for the purpose of correcting this situation, with control over the observance of this schedule to be exercised by the RAPO /rayon agroindustrial association/. The latter however, declined to exercise such control.

Serious claims have been registered against the leaders of the meat combines. As a result of a lack of control at these enterprises, the instructions governing the acceptance of livestock and poultry are not being followed.

The status of affairs with regard to the terracing of mountain slopes aroused some concern among those who participated in the meeting. The construction of terraces is being carried out at a slow tempo and quite often at a low level from the standpoint of quality. During the construction of terraces, the requirements for protecting nature are not being observed on farms in Akhmetskiy, Lagodekhskiy, Tskhakayevskiy, Zugdidskiy, Khobskiy, Makharadzevskiy and Lanchkhutskiy Rayons or in the Abkhaz ASSR. Unfinished installations are being placed in operation and in the majority of instances the staffs of acceptance committees do not include representatives from the Gruzgiprozem Institute, the scientific-research institutes for soil science, agrochemistry and land reclamation or the zonal inspections of the republic's State Committee for the Protection of Nature.

The unconditional need for eliminating these violations was pointed out.

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CSO: 184/153

## AGRICULTURAL MACHINERY AND EQUIPMENT

### REQUIREMENT FOR CONSERVING IN USE OF PETROLEUM PRODUCTS STRESSED

#### Reserves for Greater Economies

Moscow SEL'SKAYA ZHIZN' in Russian 4 Nov 83 p 1

#### Article: "Thrifty Expenditures of Petroleum Products"

Text Among the material resources being expended by our national economy during the course of its progressive movement, a special place is occupied by petroleum products. For it is these products that constitute the foundation for the country's fuel-energy balance; the requirements for them are increasing with each passing year. And this in turn requires a further increase in their production. But are our petroleum supplies inexhaustible and is the only solution for this problem that of obtaining it from almost inaccessible and only slightly inhabited areas, where each ton of "black gold" is obtained by man at great cost in terms of labor and resources? Life provides another answer to this question: the most accessible and profitable source for supplementing the fuel-energy resources is that of strict economies in their use. This is clearly borne out by the experience of leading collectives.

As is well known, agriculture is the largest consumer of fuel and oil. Truly thrifty concern is displayed for the expenditure of these materials at many kolkhozes and sovkhozes. As a rule, they are utilized efficiently and with great effect in those areas where intelligent technical servicing of the machines has been organized, where the mechanized refueling of machines with fuel and oil is carried out under sheltered conditions and where well trained machine operators and expert trouble-shooters ensure a high culture for the operation and productivity of equipment. As revealed by experience accumulated on farms in Estonia, Latvia, Moldavia, the Tatar ASSR, Krasnodar Kray and in Leningrad, Moscow and other oblasts, the true path for lowering fuel and oil expenditures includes: employing technically sound norms, efficient ganging of machines, full workloads for the engines, well organized accounting and the consistent and daily carrying out of other measures.

The campaign to achieve economies in the use of petroleum products is comprehensive in nature, including organizational, technical and educational measures. One of its sources must be the engineering service for the rural areas. The Ruch'i Sovkhoz in Leningrad Oblast serves as an example of the great opportunities that are available for organizing an exemplary petroleum economy and highly productive use of equipment. With a powerful pool of

tractors, motor vehicles and various agricultural machines at its disposal, the farm displayed concern for creating a mechanized petroleum warehouse with modern equipment. Here the losses in fuel and lubricating materials have been reduced to a minimum and their quality retained in a fine manner. The machine operators are actively participating in a competition to ensure that their machines are operated 5 days each year on fuel that was saved.

The agricultural machine operators have old and fine traditions associated with conserving in the use of funds and materials. Unfortunately however, many incidents of an opposite nature could be cited underscoring mismanagement in the use of petroleum products, with situations being created that promote waste and misappropriations. Much has been said and written regarding the operation of motor vehicles having poorly adjusted fuel equipment and defective speedometers; this has promoted excessive fuel consumption, additions to the transport distances and the formation of fuel "excesses!" It would appear that the time is at hand for restoring elementary order to this work. But here are some materials obtained from recent inspections. At the Druzhba Kolkhoz in Smelyanskiy Rayon in Cherkassy Oblast, 23 of 27 motor vehicles have defective speedometers. This year the overexpenditure of gasoline amounted to 87 tons, or 29 percent of the norm. Last year, at only 137 kolkhozes in the RSFSR where checks were carried out, the overexpenditure of gasoline for motor vehicle freight transport operations amounted to approximately 7,000 tons valued at 1.3 million rubles.

Additions to the work volumes carried out by machine operators constitute a tremendous evil. For example, during the fourth quarter of last year at the 40 Let Oktyabrya Kolkhoz in Khodzhentskiy Rayon, Leninabad Oblast in the Tajik SSR, 18.6 tons of diesel fuel were written off unnecessarily. For a fictitious volume of work the tractor operators were paid wages amounting to approximately 3,000 rubles. In a number of instances, when computing the requirements for petroleum products, use is made of inflated planning norms with no consideration being given to the actual consumption and, as a result, the requests for petroleum products are inflated. The writing off of fuel from an account for drivers is also often carried out not based upon the norms but according to the actual consumption, with no accounting being maintained on the refueling of the motor vehicles and tractors. Similar facts were uncovered at kolkhozes and sovkhozes in the Altay Kray and in Arkhangelsk, Kurgan, Chita, Kemerovo, Yaroslavl and a number of other oblasts. And indeed no special material expenditures are required for restoring elementary order in the accounting for petroleum product expenditures; a need exists merely for organizing a simple type of control. In the case of the Orlovskiy Rayon sel'khoztekhnika in Rostov Oblast, no motor vehicle with a defective speedometer was permitted to engage in operations and all fuel was issued strictly in accordance with the norm. And here is the result: last year the association saved more than 100 tons of gasoline.

There are many other reserves available for conserving in the use of fuel. Inspections carried out by Gossel'tekhnadzor have revealed that considerable quantities of fuel are lost during transport and storage. The rayon associations of Sel'khoztekhnika, which have undertaken to provide technical services for the petroleum economy at 76 percent of the farms can furnish the kolkhozes and sovkhozes with more efficient assistance in eliminating these losses. These same Sel'khoztekhnika associations are performing a great

volume of work in connection with fuel and oil deliveries. Today, under the new working conditions, they have an important role to play in ensuring a high level of technical readiness for the machines at kolkhozes and sovkhozes and this is also an important prerequisite for the thrifty consumption of fuel and lubricating materials.

At the present time, the agricultural machine operators and the collectives of repair workers are undertaking socialist obligations for the timely and high quality preparation of equipment and for its high quality use in field operations carried out during the fourth year of the five-year plan. These obligations attach priority importance to measures aimed at realizing economies in the use of material resources, among which a special place is occupied by petroleum. The thrifty use of such materials, as emphasized during a meeting of the Politburo of the CPSU Central Committee, is inseparably associated with further development of the country's economy, its intensification and implementation of the power engineering program for the USSR.

#### Specific Measures Described

Moscow SEL 'SKAYA ZHIZN' in Russian 11 Aug 83 p 2

Article by S. Kostenko, candidate of technical sciences and deputy director of the State All-Union Scientific Research Technological Institute for the Repair and Operation of Machine and Tractor Fleets; A. Rudenko, candidate of technical sciences and senior scientific worker; V. Yambayev, candidate of economic sciences and head of a department: "Each Drop To Be Valued Highly"

Text Agriculture is a large consumer of petroleum products. There are millions of tractors, motor vehicles, combines and power engineering units of various types being operated throughout the branch. Their operation on a continuous basis requires the constant availability of supplies of high quality gasoline, diesel fuel, motor and transmission oils and lubricating greases. It is sufficient to state that the operation of one DT-75 tractor, over the course of one 8-hour shift, requires 80 kilograms of diesel fuel and 3.5-4 kilograms of lubricant. Under these conditions, even a small savings in fuel and lubricating materials when carrying out a unit of mechanized work can amount to a savings of many thousands of tons of valuable resources when considered for the country as a whole.

Conservation in the use of petroleum products is a very complicated problem and the solution for it requires the use of an all-round approach. Inspections carried out periodically by GOSNITI /State All-Union Scientific Research technological Institute for the Repair and Operation of Machine and Tractor Fleets/ have made it possible to uncover many crude violations of the rules governing the use, storage and supplying of fuel and lubricating materials. Thus, on a number of farms in Novovodolazhskiy Rayon in Kharkov Oblast the petroleum products are poured into containers from transport tank cars using the open method. Lubricating greases are withdrawn from barrels manually and often using odd implements and this is in strict violation of the basic rules.

At the Kolkhoz imeni Chapayev, the measuring hatches were not hermetically sealed at the time of the inspection. The fact of the matter is that the

petroleum products are constantly being poured into containers from the transport tank cars in violation of the technical requirements. Vehicles are being refueled with diesel fuel by means of a tap from a container and with gravity flow and no control being exercised.

This type of situation at petroleum facilities is a frequent phenomenon at a number of other kolkhozes and sovkhozes. A thrifty attitude towards the use of fuel also presupposes concern for retaining its quality. However, studies have established the fact that the petroleum products on a number of farms contain water and that they are also becoming contaminated by abrasive impurities. The amount of contamination in gasoline is reaching 100 grams per ton and in diesel fuel -- up to 300 or more grams. Meanwhile the mechanical impurity content in the fuel is in violation of the GOST /State Standard/. The mechanical impurity content in motor oils is reaching one and a half kilograms per ton and in grease -- 5 kilograms.

It is known that the presence of mechanical impurities in fuel being poured into a vehicle's fuel tank increases the possibility of a breakdown of the fuel filters by a factor of 3-4. Moreover, the speed of wear and tear on the fuel unit equipment increases by a factor of 2-3. Contaminants in motor oil increase to a considerable degree (by a factor of 10 or more) the wear and tear on parts of the cylinder and piston group and the crankshaft-connecting rod mechanism.

Further harm is caused by low quality adjustment of the diesel oil equipment during the course of repair work and by untimely technical servicing of the equipment. On some farms the lead angle for fuel injection has been disrupted in many of the diesel engines. There are those who view this as a matter of secondary concern. But it increases the hourly consumption of fuel by an average of 4 grams per standard horsepower. Considering the amounts involved for our machine-tractor pool, such "secondary" losses could amount to a very large figure for the country as a whole.

There are no matters of secondary concern in the area of petroleum product economies. For example, let us take the matter of "running in" diesel engines during capital repair operations. If this work is carried out using crankcase oil, then 12-18 kilograms of motor oil are consumed and when flowing-circulating oil is employed it decreases to 6-8 kilograms.

Jointly with other scientific-research institutes, educational institutes and production enterprises, GOSNITI developed a system of methods, normative-technical documentation and technical equipment, the use of which makes it possible to ensure high quality servicing, repair and storage for the machines and to realize a substantial savings in the use of fuel and lubricating materials.

What do we have in mind here? First of all, we have in mind the introduction of an efficient structure for the organization of bases and special equipment, a delivery system for the petroleum products and centralized shipments directly to the farms. Many advantages will accrue from the use of a technology which will ensure the retention and exclude the possibility of contamination and also provide for the complete mechanization of all processes associated with the acceptance, transporting, storage and issuing of fuel and oils.

The following system is recommended for the centralized delivery of petroleum products: acceptance at a supply base, transporting and pouring into a farm container using the closed method, storage, filling a mechanized refueling unit, delivery to the machine operating areas, refueling the machines. Such a system reduces the kolkhoz and sovkhoz requirements for containers in which to store their fuel and lubricating materials by a factor of 2.5. In addition, it eliminates warehouses at brigades (detachments) and it lowers the storage costs and transport expenses by almost twofold.

There is still one other important aspect: in the process, the need for moving the machines to brigade camps for refueling purposes and the attendant expenditures of fuel and lubricating materials are eliminated. This also represents a substantial reserve for realizing a savings, since over the course of a season, an average of up to 500 kilograms of diesel fuel is consumed for the various runs made by one tractor.

The centralized refueling with motor oils is required mainly by the powerful K-700 and T-150 type tractors. High-acceleration diesel engines operate on high grade motor oils containing costly multi-functioning additives. There is not always an ample supply of these oils and quite often they are not used as originally intended. At times, owing to the absence of suitable conditions, it is difficult on the farms to determine the type of working conditions for which a particular grade of oil was intended (summer, winter, Group D or C). Thus we believe correct action is being taken in those areas where the centralized storage and refueling of machines with these oils is being organized within raysel'khoztekhnika.

The system that has been developed for the technical servicing and repair of equipment at petroleum storehouses calls for the organization of specialized departments for repair operations and stations and mobile brigades for the technical servicing of equipment. Such departments are being built according to a standard plan, as a rule one to an oblast, and they are capable of carrying out repairs on up to 400 delivery pumps or their units. As of today, there are 130 such departments in operation throughout the country.

Mobile brigades for providing technical services are being created at the rate of one per rayon. A mobile MPR 7360 GOSNITI "Petroleum Economy Service" is being placed at their disposal.

The repair, installations and technical servicing of the equipment of petroleum storehouses are being carried out on a centralized basis in all of the union republics by enterprises and organizations of Goskomsel'khoztekhnika. This work has been organized very well on farms in Orehovo-Zuyevskiy Rayon in Moscow Oblast. An economic savings amounting to approximately 16,000 rubles annually was realized alone as a result of eliminating gasoline losses caused by evaporation and leakage during storage. In the Tatar ASSR, coincidental with the introduction of technical servicing and repairs for the equipment of petroleum storehouses, a noticeable reduction took place in the actual consumption of fuel. Fine indicators were obtained in Azovskiy Rayon in Rostov Oblast, in the Lithuanian SSR and in other regions in connection with the introduction of technical servicing involving the washing of tanks.

The introduction of a system of technical servicing and repairs for the equipment of petroleum storehouses is proving to be highly effective from an economic standpoint in all areas. However, its dissemination on an extensive scale requires an increase in the production of equipment. The base required for the centralized carrying out of this work has not been created in all of the rayons, oblasts and krays. On a majority of the country's farms, petroleum product storehouses have still not been built according to standard plans, nor have existing ones been modernized. In addition, a shortage of personnel skilled in the servicing of equipment is being felt.

Considerable reserves for achieving economies in the use of petroleum products are to be found at all stages in their storage and transporting. The use of these reserves will represent a strong contribution being made towards solving the fuel problem.

#### Efficient Use of Resources

Moscow SEL'SKAYA ZHIZN' in Russian 1 Nov 83 p 2

Article by Ye. Bazarov, candidate of technical sciences: "Reserves for Economies in Use of Petroleum Products"/

Text Recently the Politburo of the CPSU Central Committee examined the question of intensifying all work concerned with the thrifty and efficient use of petroleum products and defined the principal trends for carrying out this work. The efforts of the agricultural workers must be directed towards uncovering and utilizing, in all areas, the reserves that are available for economizing in the use of fuel and lubricating materials and reducing their losses sharply. Greater control must be exercised over all work concerned with achieving economies in the use of petroleum products and the economic leaders must display greater responsibility for the organization of labor and for creating conditions at each working position which will ensure the thrifty and efficient use of energy resources.

Modern agricultural production, as is well known, is based upon the use of machines and machine technologies. And this in turn involves increasing expenditures of fuel and energy resources, especially liquid fuel. Three fourths of the power engineering capabilities of agriculture operate on the basis of such fuel -- tractors, combines, motor vehicles and other items of equipment. Moreover, the power engineering capabilities in the rural areas are constantly increasing.

It would seem that the increasing degree of technical equipping for the kolkhozes and sovkhozes and for agriculture on the whole should promote a reduction in production expenditures per unit of output, including power engineering expenditures. However, this unfortunately has not taken place. Why?

First of all, this results from imperfections in the structure of the machine-tractor pool on the farms. The conversion over to the production of powerful

3 and 5 ton wheeled tractors in recent years has led to an increase in the proportion of wheeled tractors and to a substantial reduction in the proportion of caterpillar tractors: from 54 percent in 1960 to 36 percent in 1980. Assuming the same fuel consumption for the engines, the per-hectare expenditure of fuel for wheeled tractors is 8-15 percent and under damp conditions almost 30 percent more than that for caterpillar tractors. More often than not, this is associated with the wheel drive systems. The wheeled K-701 tractors consume 17.4 kilograms of fuel per hectare for plowing, the T-150K wheeled tractor -- 19.3 and the DT-75 caterpillar tractor -- 15.6 kilograms of fuel per hectare. The situation is further aggravated by the fact that the tractor pool contains a considerable proportion (approximately 22 percent) of machines of obsolete models (T-74, MTZ-5, DT-14), the engines of which consume 200-205 grams of fuel per hour for each horsepower, whereas the best modern engines consume only 175 grams.

One very important problem is the need for achieving the best ratio for wheeled and caterpillar machines in a pool and in general developing an optimum structure for a farm. Many scientists believe that the most efficient arrangement from a fuel economy standpoint is to have a machine pool in which 60 percent of the vehicles have caterpillar drives.

Improvements are also required in the structure for motor vehicle freight transport operations. First of all, the proportion of diesel vehicles, which are distinguished by a high fuel economy, in a truck pool is presently only 3 percent. For the most part, the pool consists of motor vehicles with carburetor engines, with fuel consumptions which are 25-30 percent greater than those for diesel vehicles. Secondly, a truck pool in the rural areas contains very few motorized dump trucks. It is for this reason that it becomes necessary to divert less economic (from a fuel standpoint) wheeled tractors from field operations. These machines consume three times more fuel per ton-kilometer than do motor vehicles with carburetor engines and seven times more than diesel motor vehicles. Thus it is possible to realize an annual savings of approximately 5 million tons of clear petroleum products merely by improving the structure of the agricultural motor pool.

Those kolkhozes and sovkhozes which do not have specialized transport equipment with large carrying capacities often use K-701 and T-150K tractors for transporting volume freight (hay, straw, sun-dried grass, fodder for ensiling and so forth). However, very few trailers deemed suitable for this work are being produced and thus the farms must employ low-capacity trailers and this is not only inefficient but also expensive.

During the years of the Ninth and Tenth Five-Year Plans, the tractor pool in agriculture increased by 37 percent and the pool of agricultural working machines for use with them -- by only 12 percent. As a result, many tractors lack the required sets of machines and implements. For example, the highly productive T-150K and K-701 tractors require the production of 112 types of agricultural machines and yet only one half of this number is actually in production. Moreover, the rural areas are being supplied with many machines of obsolete modifications and low productivity. As a result, full use is not being made of the modern tractor pool and during the harvest season, the combines, owing to a shortage of motor transport vehicles and despite the fact

that their engines are in good operating condition, lie idle waiting for their hoppers to be unloaded. This generally tends to increase fuel consumption by 30 percent.

Substantial energy losses, especially fuel losses, are borne by the kolkhozes and sovkhozes owing to low quality repairs being carried out on the machines, poor technical servicing and unsatisfactory organization of the fuel economy. Only one half of the kolkhozes and sovkhozes have standard petroleum economies and only one third -- standard stations for the technical servicing of the machines. Consequently, many thousands of tons of fuel and lubricating materials are lost.

At the same time, we have farms where the consumption of fuel resources per unit of output is increasing at lower rates or even decreasing. For example, in 1980, at the Sovkhoz imeni 60-Letiya SSSR in Yemelyanovskiy Rayon in Krasnoyarsk Kray, 327 tons of fuel were expended per million rubles worth of gross output, in 1981 -- 303 tons and in 1982 -- 280 tons, or considerably less than the average for kolkhozes and sovkhozes in the kray. During the mentioned years the specific consumption of boiler-furnace fuel at this farm decreased by a factor of 2.3 and electric power -- by a factor of 1.2. As a result of this factor alone the sovkhoz succeeded in increasing its profit by 15.3 percent.

As is known, the capital repair of tractors, combines and their engines is carried out after 2-3 years of operation. The number of machines undergoing capital repair work is increasing with each passing year. In agriculture, approximately 80 percent of these machines in the overall equipment pool will undergo such repair work this year. Thus extreme importance is attached to ensuring personal responsibility for the repair operations and to making sure that each farm has a station for providing technical services for the machines and a workshop in which to carry out unit repairs. This will bring about a noticeable reduction in the branch's fuel expenditures. Studies have shown that the fuel equipment of engines which have not been properly serviced cannot ensure a normal operating regime for the machines and thus the amount of fuel consumed is 25-30 percent above the norm.

In the work of economizing in the use of fuel and raising the productivity of machines, a great deal depends upon ensuring that the working organs are properly adjusted and that the units are operating in the most efficient manner possible. Thus, when the units of a grain harvesting combine are accurately adjusted, the productivity is raised by 25-30 percent, grain losses are reduced considerably and a savings in the use of fuel is realized. Reference can be made to the experience of machine operators at the Kolkhoz Borets in Ramenskiy Rayon in Moscow Oblast. After thoroughly adjusting their feed harvesting units (adjusting the cutting height for the grasses, the degree of crushing of the fodder for the laying in of haylage and silage and the speed of movement for the blades, conveyer lines and rotation of the reel) and having properly prepared the fields, they succeeded in achieving a high level of productivity for the machines and in realizing a considerable economy in the use of fuel.

The introduction into operations of energy conserving technologies can result in considerable fuel economies. For example, a soil-protective technology for

farming which has been undergoing a practical check over a period of many years in Kazakhstan, the southern Urals and in other regions is making it possible through the tilling of soil alone to realize an economy of 5-7 kilograms of fuel per hectare. A substantial reserve for realizing economies in the use of energy is also embodied in combining technological operations and employing multiple-unit machines. For example, the AKR-3.6 soil cultivation multiple-unit assembly, which has undergone state testing, is making it possible in the southern steppe zone to lower power expenditures to 36-45 kilowatt-hours per hectare instead of 67 kilowatt hours, the amount usually required for disking the soil using a heavy BDT-7 harrow.

The chief inputs for realizing a maximum economy in the use of liquid fuel -- all-round optimization of the structure and efficient methods for utilizing and repairing the pool of machines, correct technological adjustments for the machines and flexible technological maneuvering under various weather conditions.

A large number of thermal units are employed in agriculture -- boilers, feed preparation units, drying equipment and heat generators which as a rule consume liquid fuel. In connection with the development of such energy-intensive production efforts as the preparation of dehydrated feed, vegetable production on sheltered ground and others, a sharp increase has taken place in the requirements for thermal energy (for boiler-furnace fuel). For such processes, use should ideally be made of the secondary power resources of gas compressor stations of main gas pipelines, which as a rule are located in the vicinity of agricultural lands and have large volumes of exhaust heat, which can be employed in place of liquid fuel. If, for example, use is made of the technology developed by the All-Union Scientific Research Institute for the Electrification of Agriculture for the natural sun-drying of grass bulk out on a field to a moisture content of 50-55 percent, with subsequent drying out in low temperature conveyer line drying units fed by the exhaust heat of a station, then a noticeable savings is realized in liquid fuel per unit of feed. Such a technology is being employed, for example, in the Bashkir ASSR.

In order to evaluate in a more objective manner the trends for realizing economies in the use of liquid fuel per unit of final product, the Department for the Mechanization and Electrification of Agriculture of VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ developed some methodological recommendations. They substantiate the methods for conserving in the use of energy, with total expenditures being taken into account. The recommendations facilitate the computations of the energy expenditures in connection with the introduction of new technological processes and they make it possible to select energy-conserving solutions.

The computations indicate that during the next few years the greatest economies in the use of liquid fuel will be provided by the use in agriculture of the secondary energy resources of thermal and atomic power stations, the exhaust heat of gas and motor compressor stations and industrial installations, biogas obtained from animal husbandry waste products and geothermal energy. However, there is much to be accomplished here by science. First of all, a requirement exists for developing and introducing into production operations power-resource conserving technologies for production operations in animal husbandry

and farming. Importance is also attached to carrying out more intensive studies on the use in agriculture of non-traditional sources of energy (solar, atomic, wind and others). Together with other measures, this will make it possible to realize perceptible savings in the use of energy resources.

#### Repairs and Technical Servicing

Moscow SEL'SKAYA ZHIZN' in Russian 11 Nov 83 p 2

Article by V. Minayeva, engineer at Goskomsel'khoztekhnika for the RSFSR, Omsk Oblast: "Inputs for Economies"

Text For a number of years now, the collective of the Omsk raysel'khoztekhnika has been undertaking sound obligations, concluding realistic agreements and carrying them out in an accurate manner.

For example, raysel'khoztekhnika on the one hand and 28 farms in Omskiy and Kormilovskiy Rayons on the other conclude an "Agreement for Servicing and Carrying Out Current and Capital Repairs on Petroleum Storehouse Equipment." Two brigades were organized within the Department for the Technical Servicing of the Machine-Tractor Pool, headed by R. Mukhametshin, with each brigade being provided with a specially equipped motor vehicle workshop containing the necessary spare parts and units. Included among the latter -- two fuel delivery pumps, three pumps, two registers, a set of hoses and distribution valves. Later a new unit was received for the cleaning and washing of GOSNITI State All-Union Scientific Research Technological Institute for Repair and Operation of Machine and Tractor Fleets OM-12394 tanks and other equipment.

The brigades were provided with 202 fuel and oil delivery pumps and 569 tanks by the petroleum establishments of kolkhozes and sovkhozes. Petroleum products were also delivered to the farms by motor transport vehicles -- raysel'khoztekhnika.

In conformity with the schedule, the brigades carry out initial technical servicing once every three months and the second servicing -- after six months. The planned servicing of the petroleum establishments and the carrying out of current repairs on their equipment made it possible for the enterprise to carry out 60,000 rubles worth of work against an annual plan calling for only 58,000 rubles worth.

The petroleum storehouses are being provided with new equipment. For example, three KED-40 electronic remote control units have been delivered, each of which controls the refueling of machines at 12 pumps. Other complicated items of equipment are being supplied which require new knowledge and the use of a creative approach when carrying out technical servicing work on them. All of this is forcing the workers attached to the raysel'khoztekhnika to display greater initiative and to expand the assortment of technical services.

Nor can the work be carried out in the absence of difficulties. A spare parts shortage is arousing a considerable amount of anxiety. It often happens that a particular part costing 10-20 kopecks cannot be obtained for less than 50

rubles. Here is an example. Upon accepting requisitions from the Omsk raysel'khoztekhnika for individual parts, the Serpukhov Nefteapparatpribor Association sends them assembled with the entire unit.

There is a shortage of hoses, paints, solvents and flexible hoses for the gasoline carriers. Contacts must be established with those colleagues who service municipal AZS /filling stations/ and exchanges of spare parts and materials carried out with them. And certainly, where possible we must do whatever we can using our own resources: coil springs for the registers and carry out repairs on them.

The raysel'khoztekhnika dispatcher receives radiograms, orders and requests. The farms request deliveries of fuel and oil and they also ask to have mechanics and specialists sent out to them for the purpose of monitoring the consumption of GSM /fuel and lubricating materials/, checking upon the amounts remaining and, when necessary, redistributing them. All of this is controlled by a department headed by R. Mukhametshin.

And it is on the farms that the concern evidenced by raysel'khoztekhnika is valued at its true worth. The director of the Krasnoye Znamya Sovkhoz G.Ye. Peretyatko has stated that its specialists are skilfully servicing the farm's petroleum storehouse. And this is proving to be of benefit, since it is resulting in a savings in the use of petroleum products.

"Jointly with raysel'khoztekhnika, we are presently developing conditions for issuing incentives for economizing in the use of fuel" stated Grigoriy Yefimovich, "Those who are guilty of over-expenditures of fuel will be held accountable."

It bears mentioning that such measures are already being carried out at the Luzinskiy Sovkhoz and at other farms in the rayon. However, a great amount of work still remains to be carried out in connection with the observance of limit discipline at kolkhozes and sovkhozes throughout the rayon.

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## LAND RECLAMATION AND WATER RESOURCES

### WATER WASTAGE DISCUSSED, POLLUTION CHARGES ASKED

Moscow SOVETSKAYA ROSSIYA in Russian 9 Dec 83 p 3

[Article by V. Danilov, candidate of economic sciences: "How Much Water Flows Away"]

[Text] Two areas of our lives and activities are inseparably linked -- economics and ecology. Ever greater attention is being given to problems of the economic mechanism's impact upon the environment.

I will not discuss the entire problem, it is too broad and multifaceted. I will only dwell on one part of it; how we utilize water and how the existing economic mechanism for managing this is in need of improvements and changes.

The Soviet Union has huge water resources. The annual surface runoff is around 4,000 - 5,000 cubic kilometers. Its average use for economic and household needs does not exceed 7-8 percent of this figure.

However, these resources are unevenly distributed. There are tight balances in a number of regions -- the south and in the European parts of the RSFSR. It is in these areas that the demand for fresh water is growing rapidly as industry develops, agriculture is intensified and big social problems are solved. It has to be pumped up from considerable depths, moved great distances and special installations must be built.

Expenditures and capital investments are having ever greater results. There have been reductions in the runoff of polluted water, the volume of recycled water at our industrial enterprises has grown by 25 million cubic meters and has reached 67.6 percent.

However, even in view of the importance of the results attained, there are still many bottlenecks. The main problem is that there has not yet been developed a system of economic incentives which would put a stop to extravagance.

True, a first and very important step has been made in this direction -- a payment has been introduced for water which enterprises withdraw for production uses from rivers, lakes and reservoirs. Depending upon the characteristics of individual regions, the rates range from 0.35 to 2 kopecks per cubic meter. At first glance this is not much, but enterprises use tens, hundreds and even

millions of cubic meters. Thus, the total sum is substantial enough to have an effect upon profits and premiums. This is all the more true because after a limit has been passed penalty rates go into effect which are up to five times as much.

There are interesting results from an experiment conducted prior to the new system's introduction. For several years now along the Irtysh - Karaganda Canal there has been a payment for water which has substantially reduced consumption without any damage to production. Annual savings are about 1 million cubic meters. This is enough to supply a city of 30,000 - 35,000.

However, as I have already stated, this is only the initial step. First of all, it did not affect water resource organizations. Thus a paradoxical situation arose. Those who regulate water consumption, allocate it and who answer for its rational use are, from a material perspective, indifferent to all this: payments for water go into the state budget. Minvodkhoz [Ministry of Land Reclamation and Water Resources] organs are living easily. They are outside of khozraschet [profit and loss accounting] and are "sitting" on the resources which the state allocates to them in a planned manner, independently of the success or failure of their activities.

Secondly, agricultural enterprises have been freed from paying for water. It is they, after all, who use half of it -- an annual average of more than 150 cubic kilometers. The socially necessary labor costs involved in water supply are paid out of the state budget. Why is this so? Can it really be tolerated that only about 50 percent of the water going for irrigation is fruitfully utilized?

It is time to reexamine the existing system of economic sanctions for polluting aquatic environments. Present penalties have little effect. Their size is arbitrarily determined. They are only paid out of that part of profits intended for payments to the budget, i. e. out of state resources. This has no impact on economic incentives funds. It is necessary to tell it like it is: the violations are not paid for by the guilty party, but by Gosbank. These are not fines, but are pseudofines.

Serious attention should be given to the conservation of water for household use, especially drinking water. Its use per urban dweller is greater in our nation than in any other place in the world, at least 250 liters daily. This, of course, is an indicator of the material standard of living, of the degree of comfort and communal services. However, it is not so simple. Studies show that on a national average more than 20 percent of the drinking water piped into homes is used irrationally.

There are several reasons for this: the low technical standards of the water pipe and distribution systems, accessories, bath tubs, etc., the shortage of pipe, transformers, cables, startup equipment, hardware for automation, etc. However, this is not all, technology is not the only problem.

The basic reason for the existing order, or more accurately, lack of order, is the imperfected economic mechanism for management. The universal practice of planning supply "from the attained level and of evaluating the work results of

water supply enterprises on the basis of sales volume have led to an absurd situation. It is advantageous to over consume water rather than economize on it. There are incentives for the overfulfillment of targets, mainly volume and financial indicators. Thus, workers at water supply operations are not paid for thrift, but for overfulfilling the water use plan. Therefore they have absolutely no interest in leakage out of rusty pipes. This amounts to 37 million cubic meters annually. You can see where the incentive mechanism is pointing! It has become obsolete but is still retained. Although it will not be easy to change it, there is already experience in this. For many years the city of Zelenograd near Moscow has strictly controlled water use. Here they rejected the generally accepted system of planning and have introduced a procedure for giving incentives to drinking water conservation. The reduction in supplies has not led to declines in bonuses for water system workers. Nor have the inhabitants suffered in any way. Their needs are completely met, even though the city is growing and apartments are getting bigger.

Finally, let us talk about the use of water in the home, apartment and family. Are people concerned about its conservation? No, they are not. The problem is once again about payments and bills. I will not dwell in detail about how the state assumes a considerable share of uses for services (similar to communal services in general). This is the way it is, these are our social benefits. However, families' payments for water remain only symbolic payments. It is, after all, money and the housekeeper will notice it. The whole problem is that there is nothing to account for. The bill is the same no matter how much water flows from the tap. Is this rational? They will not forget to turn off the tap in a family where everybody has been educated in a spirit of thrift. But how many families are there where the taps will remain open even though there is no need for it? What if the kopecks were pouring out for such "comforts"? Perhaps, without increasing the bill, it can be differentiated not by the number of family members, but by water use.

In the GDR everything is made simple, all water is metered. This is not only for apartments, but for the water supply system in general. This means that attention is paid to meter readings.

In short, I will let the interested (and if they want, the "uninterested") readers judge my proposal: transfer the use of water resources -- in all the channels and directions of their use -- to kholzraschet.

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